SKY ELEVATOR

AC Series Lift Control System

USER MANUAL

AC SERIES LIFT CONTROL SYSTEM

USER MANUAL

VERSION: 1.10

SKY ELEVATOR

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PREFACE

AC Series Lift Control System has been designed to fulfill the needs of lift sector at new age. One of the main aims of this series is to integrate lift control system with today's advanced computer systems.

AC Series Lift Control System is controlled by a 32-bit high performance microcontroller. Besides having all features of general lift control systems, AC Series can also communicate with a computer directly or via internet. By this way it is possible to access and observe all lift motion and edit parameters for authorized users by a computer.

In this manual, you can find detailed information about using AC Series Lift Control System, technical documents and schematics. If you think that this manual is not enough or it is not compatible with hardware or software version of your system, you can download latest version of the manual from website of Sky Elevator (www.sky-elevator.com) or send an e-mail to request.

We will continue to develop this product with your support and suggestions. Therefore, if you face any problem while using this product or if you have any suggestions to make it better, please inform us by e-mail (sky@sky-elevator.com).

Sky Elevator

GENERAL DESCRIPTION

A) COMPONENTS AND CONFIGURATIONS

Systems contain the following boards:

ACS : It is the main controller board of ACS system. It contains microcontroller, LCD display and keypad, to manage system. This system works in electric lifts, has 2 programmable inputs and 4 programmable relay outputs.

ACH : It is the main controller board of ACH system. It contains microcontroller, LCD display and keypad, to manage system. This system works in hydraulic lifts, has 2 programmable inputs and 3 programmable relay outputs.

ACT : It is the main controller board of ACT system. It contains microcontroller, LCD display and keypad, to manage system. This system works in electric lifts, has 2 programmable inputs and 2 programmable relay and 1 transistor outputs.

ACC : It is the car controller board that supports up to 64 floors. It gets cabin calls and signal inputs, collects information from switches and detectors placed on the car and transmits to main controller. It contains 3 (optionally 15) programmable relay outputs and 8 (optionally 16) programmable inputs.

SCC : It is the car controller board that supports up to 16 floors. It gets cabin calls and signal inputs, collects information from switches and detectors placed on the car and transmits to main controller. It contains 1 programmable relay outputs and 8 programmable inputs.

OUT : This board contains 4 programmable output relays.

INP : This board contains 4 programmable inputs.

ENI : Encoder terminals connection board.

CSI : This is CAN interface board. One CSI is used to collect shaft information in ACH/ACT systems. If the controller works in a lift group then use second CSI board for group communication connection.

ETH : Ethernet interface board.

USB : USB interface board.

RS232 : RS232 interface board.

IDC : ERS connection interface board.

IO : It is the I/O board for the call registers which contains 8 I/Os. (ACH/ACT)

RTC : Real Time Clock board. (ACH and ACT Series)

ACSK : Serial communication terminal board.

ACPK : Parallel communication terminal board. (ACH and ACT Series)

ETU : Computer connection board for Ethernet and USB.

SW232 : GSM Modem connection board.

I. SERIAL CONFIGURATION

In this configuration, all inputs and outputs of shaft are transmitted serially through CAN-Bus network except safety circuit. (Add CSI board in ACH and ACT Series)

II. PARALLEL CONFIGURATION

ACH and ACT Series support this configuration. Controller communicates with car and landings in point to point connection. Add I/O board for command system and floor requirements and add CSI board in group lift.

III. SERIAL CAR - PARALLEL LANDINGS CONFIGURATION

ACH and ACT Series support this configuration with CSI board. Add I/O board depends on number of push-buttons in landings.

IV. ERS (EKS) OPTION

ESM/EGH (Gearless): Mainboard of Electronic Rescue System. It contains microcontroller circuit and has two serial communication interfaces for controller board of panel and motor inverter boards.

EPS: Power supply board of Electronic Rescue System. It also charges batteries in normal mode.

EMD: Motor driver board. It drives 3-phase lift motor in rescue mode.

APS : Battery charge board of ERS system. Use in systems with UPS + Battery.

B) PANEL VOLTAGE INFORMATION

a. Safety Circuit Voltage: Depends on the contactor coil voltage. Maximum allowed voltage is 230V AC.

b. Signal Voltage: 24V DC is used for signal lamps and control of relays on the boards. The current of this supply is mainly determined by the current requirements of the push-buttons used in the system.

c. Microcontroller Voltage: 10V AC is required for the power supply of the microcontroller circuit.

C) INPUTS AND OUTPUTS

The power supply for signal and control circuits is 24V DC.

All inputs except safety circuit monitoring detect a signal as present if it connected to the reference (0V) of 24V circuit. They run active low and transmit data via an optocoupler. All inputs and outputs are 100% galvanically isolated from the microcontroller circuit.

The outputs are mainly made of relays. Some outputs are dedicated for a purpose where some of them are user programmable.

D) SHAFT INFORMATION COLLECTION

Shaft information can collected in following ways:

I. SHAFT INFORMATION WITH MAGNETIC SHALTERS:

The required magnet shalters are shown in the following table:

	Deceleration Distance < ½ Floor to Floor Distance		**Deceleration Distance > ½ Floor to Floor Distance**		**Program Input**
	No Releveling	With Releveling	No Releveling	With Releveling	
Floor Counter	B	B			M0
Floor Counter Up		S	B	B/S	M1
Floor Counter Down		S	B	B/S	M0
Floor Level	B/S	B/S	B/S	B/S	MK
Floor Level Up		B/S		B/S	MKU
Floor Level Down		B/S		B/S	MKD
Releveling Allowed		B/S		B/S	ML1/ML2
Door Zone	*	SLB Board	*	SLB Board	**

B: Bistable Magnet Shalter
S : NO Magnet Switch

* In case of pre-opening of doors, the case ** must be applied.
** For releveling with open doors, an external SLB board must be connected to ACS/ACT Series, which bridges door contacts during releveling. Connect A0 terminal to ML1 and B0 terminal to ML2 of SLB board which is closed at door zone and open elsewhere.

II. SHAFT INFORMATION WITH ABSOLUTE ENCODER

An absolute encoder can be used to collect shaft information. In this case, the absolute encoder is connected to ENI board, which is connected to the mainboard. ENI reads and sends data from absolute encoder to the mainboard. In case of releveling with open doors or pre-opening doors, the door zone detector and SLB board (ACS/ACT Series) must be used exactly as explained above.

III. SHAFT INFORMATION WITH INCREMENTAL ENCODER

An incremental encoder can be used to collect shaft information. Pulse A and Pulse B outputs of the encoder are connected to ENI board terminals. In case of releveling with open doors or pre-opening doors, the door zone detector and SLB board (ACS/ACT Series) must be used exactly as explained above.

E) SAFETY LINE STRUCTURE

The safety line is convenient for any safety line voltage (24V AC…230V AC and 24V DC…110V DC). The power supply of the safety circuit is labeled as 110. The current flows through STOP circuit which returns to the terminal 120. The door contacts are connected between the terminals 120-130. Finally, the door locks are connected between the terminals 130-140.

Here is the explanation of terminals:

120 : It stands for stop circuit. If terminal 120 is present then it means that pit switch, shaft final switches, speed regulator, parachute and car top switch are all closed.

130 : When this terminal is present then it means the cabin door is closed.

140 : When this terminal is present, then it means that the landing doors are closed (for full automatic systems) or the door locks are closed (for wing doors). 140 is also power supply terminal for contactor coils or hydraulic valves.

a) Contactor Coil Voltage and Safety Line Voltage

Safety line voltage is allowed between the limits 24V AC…230V AC and 24V DC…110V DC. The contactors and valves which drive directly motor, inverter and hydraulic units must have the same coil voltages as the safety line voltage. If any of these components has different coil voltages than the safety line, one or more SFX boards must be connected to the circuit. You will find related connection methods in schematics.

b) System with Door Bridging (Pre-Opening Doors or Releveling with Open Doors)

When releveling with open doors or pre-opening doors are desired then SLB board must be add to ACS/ACT Series. This special SLB board/circuit bridges 120 - 140 through its terminals SF1 and SF2. In ACH Series, door bridging is standard.

If any relay fails for any reason then the circuit blocks itself and never bridges the SF1 and SF2 terminals again which bridges the door contacts. According to the standard EN-81, this bridging circuit has to be driven by two independent door zone detectors.

OUTPUT TERMINALS AND THE MEANINGS OF THE ABBREVIATIONS

100	Signal Circuit Supply (+24V DC)	**1**	Phase Line output for Cabin (220V AC)
1000	Signal Circuit Ground	**1F - NF**	Well and Cabin Lamp Line - Neutral
10AC	10V AC Voltage	**2**	Phase Line Output for Cabin Lamp (220V AC)
L1, L2, L3	Main Phases	**A…G**	Right Display Segment Outputs
MP / N	Neutral	**2A…2G**	Left Display Segment Outputs
110	Safety Circuit Supply	**M**	Hydraulic Lift Motor Contactor
111	Pit Stop Button	**D**	Hydraulic Lift Delta Contactor
112	Overspeed Governor	**S**	Hydraulic Lift Star Contactor
113	Up - Down Well Limits Supply	**CLS**	Close Door Signal (Automatic Door)
114	Up - Down Well Limits Return	**OPN**	Open Door Signal (Automatic Door)
115	Parachute Contact	**DCM**	Door Signal Common
116	Car Top Stop Button	**CH0**	Serial Communication Line for Well CH
117	Emerg. Elec. Op. Switch Stop Circuit Return	**CL0**	Serial Communication Line for Well CL
120	Stop Circuit Return	**CH1**	Serial Communication Line for Group CH
130	Door Contacts Return	**CL1**	Serial Communication Line for Group CL
140	Door Locks Return	**LCM**	Common of Automatic Door Limit Signals
150-151	Safety Circuit Common	**AL**	Automatic Door Open Limit
840	Positive Terminal of Brake	**KL**	Automatic Door Close Limit
2000	Negative Terminal of Brake	**S1…S4**	Programmable Relays
2001	Positive Terminal of CAM	**O1…OC**	Programmable Relay Outputs
810	Negative Terminal of CAM	**12**	Busy Signal
817	Lower Limit (End of fast speed way)	**31**	Down Arrow Signal
818	Upper Limit (End of fast speed way)	**32**	Up Arrow Signal
FXX	Fuses	**35**	Overload Signal
FFP	Brake and Cam Fuse	**39**	Out Of Service (Inspection) Signal
FK	Contactor Fuse (220V AC)	**C0…C32**	Register Button Inputs/Register Lamp Outputs
FKL	Cabin Lamp Fuse	**ML1, ML2**	Door Open Zone Limit Signal for SLB Board
FWCX	Safety Line and Contactor Supply Fuse	**COM (VCM)**	Valve Common
U1, V1, W1	Motor High Speed Inputs	**G0…G3**	Gray Code Outputs
U2, V2, W1	Motor Low Speed Inputs	**M2…M4**	Gray Code Inputs
FKI	Motor/Phase Protection Relay	**ALF**	Alarm Filter Output for Emergency Phone
FAN	Supply Voltage for Motor Fan	**THR**	Temperature Control Input for Machine Room
I0…I8	Programmable Inputs	**KF**	Brake Contactor
T1-T2	PTC Motor Thermistor Terminals	**FR**	Brake Contactor Auxiliary Relay
TMS	Thermal Magnetic Circuit Breaker	**FD-/FD+**	Floor Level Detector Output Display
TR	Thermal Relay	**KS**	Hydraulic (Re)leveling Contactor
190	Hall Call Common for Simple Push Button	**EV-/EV+**	Emergency Down Valve Supply
HU	Upper Limit (End of High speed way)	**KM**	ERS(EKS) Motor Output Contactor
HD	Lower Limit (End of High speed way)	**MC**	Line Input Contactor of Panel with Integrated ERS
870	Emergency Electrical Operation Switch	**EMA**	ERS Motor Current
550	Emergency Electrical Operation Down Switch	**RK-RA**	Tri-phase Door Contactors
551	Emergency Electrical Operation Up Switch	**LDB**	Load Button
869	Inspection Switch	**DIK**	Door Inspection Key
500	Inspection Down Button	**DER**	Device Error Input
501	Inspection Up Button	**RUN**	RUN Input
555	Fast Inspection Input	**DPM**	Earthquake Input
802	Minimum Load	**FRM**	Fireman Switch
804	Overload	**UF**	Up Fast Valve
805	Full Load	**US**	Up Slow Valve
DTS	Open Door 1 Button	**DF**	Down Fast Valve
K20	Close Door 1 Button	**DS**	Down Slow Valve
DT2	Open Door 2 Button	**K1-K2**	Inverter (VVVF) Output Contactors
K22	Close Door 2 Button	**MCR**	Inverter (VVVF) Output Contactor Auxiliary Relay
FO	Door 1 Photocell	**RAY**	2^{nd} Door Open Relays
T	Door 2 Photocell	**RKY**	2 Door Close Relay
FT2	Fire Signal 1 Input	**TRF**	Low Voltage Transformer inside Panel
FR1	Fire Signal 2 Input	**PR**	Line Isolation Relay
FR2	Door 1 Open Input	**KUPS**	UPS Output Contactor
DL1	Door 2 Open Input	**FKR**	UPS Phase Protection Contactor
DL2	Door 1 Activate Input	**BS**	Gearless Machine Brake Release Shalter
DOA	Door 2 Activate Input	**B1B, B2B**	Gearless Machine Brake Release Buttons
DOB			

LUP/NUP	UPS Phase/Neutral Inputs	**LP/NP**	UPS Phase/Neutral Outputs
917	Bottom Floor Level Limit	**918**	Top Floor Level Limit
EKF1, EKF2	Synchronous Machine Manual Brake	**OR**	Overspeed Governor Remote Control Switch
SG1,SG2	Overspeed Governor A3 Coil Terminals	**ORR+, ORR-**	Overspeed Governor Reset Coil Terminals
KSG	OSG A3 Coil Driving Contactor	**ORT+, ORT-**	Overspeed Governor Test Coil Terminals
SGO	OSG A3 Coil Monitoring Contact	**BR1, BR2**	Synchronous Machine Brake Control Contacts
SGC	KSG Contactor Monitoring Contact	**KSF1, KSF2**	Safety Contactors
DLV	GMV Hydraulic Unit Additional A3 Valve	**RDY**	External Device Ready Signal Input
DSV	Bucher Hydraulic Unit Additional A3 Valve	**B0, B1…B4**	Binary Code Output Terminals
HD	OMAR Hydraulic Unit Additional A3 Valve	**FTKR**	Earth Leakage Relay
U	Blain Additional A3 Valve		
L10			

CHAPTER 1:
LCD SCREEN AND KEYPAD USAGE

ACS Series has an LCD screen with 4-rows 20-characters per line and 6-keys keypad. ACH/ACT Series have an LCD with 2 rows and 16 characters per line 6-key keypad.

Keys are located as below:

ESC		ENT

Functions of the keys differ in different menus. But generally, ESC is used to exit current menu; ENT is used to enter a menu or confirm any input; up and down arrows are used to move in menu lists and change value of a variant; left and right arrows are used to move left and right while changing the value of variant.

1-A) STARTUP SCREENS

When system is first energized or restarted, below screen displays.

ACS Series

```
AYBEY ELEKTRONiK
AC S x-yyy
system is loading..
                    OK
```

ACH and ACT Series

```
AYBEY ACH x-yy y
reading errors..
```

At this moment, system parameters are loaded and below screen is displayed.

ACS Series

```
ACS starting...


DD/MM/YYYY     HH:MM
```

ACH and ACT Series

```
ACH starting...
DD/MM/YYYY HH:MM
```

Meanings of the items in these screens are explained below.

x-yyy	Software Version
DD/MM/YYYY	Day/Month/Year DATE
HH:MM	Hour: Minute TIME

After displaying this screen about 3 seconds, "MAIN SCREEN" is displayed.

1-B) MAIN SCREEN

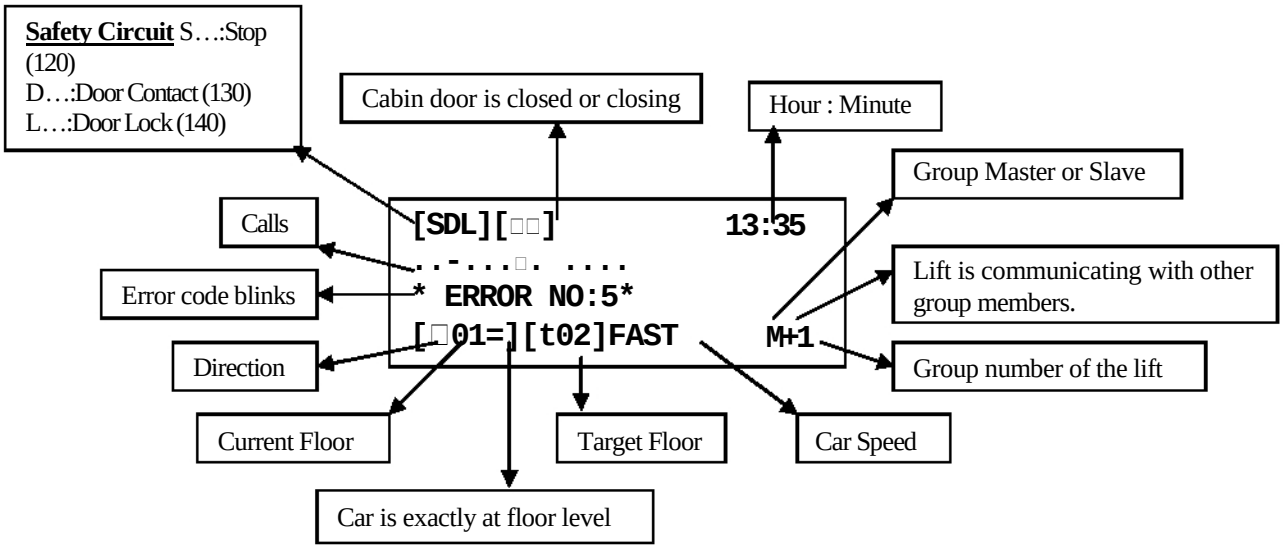
i) NORMAL MODE

a) ACS Series

```
[SDL][□□]          16:37
........

[ 01=][INS]STOP     M +1
```

The main screen displays the most important lift parameters briefly at one look.



TOP ROW:
[S]: **S**top circuit is closed.
[SD] : **S**top and **D**oor Contact circuits are closed.
[SDL]: **S**top, **D**oor Contact and Door **L**ock circuits are closed.

[□□] : Door is opening. (CAM is active) **[□□]** :
Door is closing. (CAM is inactive)
13:35 : HOUR:MINUTE

MID-ROWS (2,3):
Row 2 and 3 shows Call Registers. Most left character of row 2 shows the calls for bottom floor. As moving right, floor number increases. One character is used for each floor. The meanings of symbols are explained below:

□̃ : No call for this floor
□ : Cabin call for this floor
□ : Up call for this floor
: Down call for this floor

In a floor 1, 2 or 3 of these symbols can appear together at the same character (except □). In these rows, only defined floor number of characters can be seen.

BOTTOM ROW:

Columns [2, 3, 4, 5] : This group shows information about floor and moving direction of car.

[05=] : Car is exactly at floor 5. (Car is exactly at floor level)

[05] : Car is at floor 5. (Car is between floors)

[□05] : Lift has a target on up direction.

[□05] : Lift has a target on down direction.

Columns [8, 9, 10] : This group shows information about target and run mode of lift.

[INS] : Lift is in **INS**PECTION mode.

[t__] : Lift has no target.

[t03] : Lift has a target of Floor 3.

Columns 12, 13, 14, 15, 16 : This group shows information about motion and speed of car.

STOP : Car is stopping.

START : Car is stopping but about to move. Lift is preparing conditions for moving. (Closing door)

SLOW : Car is moving at slow speed.

FAST : Car is moving at fast speed.

HIGH : Car is moving at high speed. (over 1m/s)

MAINT : Maintenance

Columns 18, 19, 20 : This group shows information about group operations. (Displays only in group lifts)

M+1 : Group manager, group number is 1 and in communication with the other members.

M-1 : Group manager, group number is 1 and cannot communicate with the other members.

S+2 : Group member, group number is 2 and in communication with the other members.

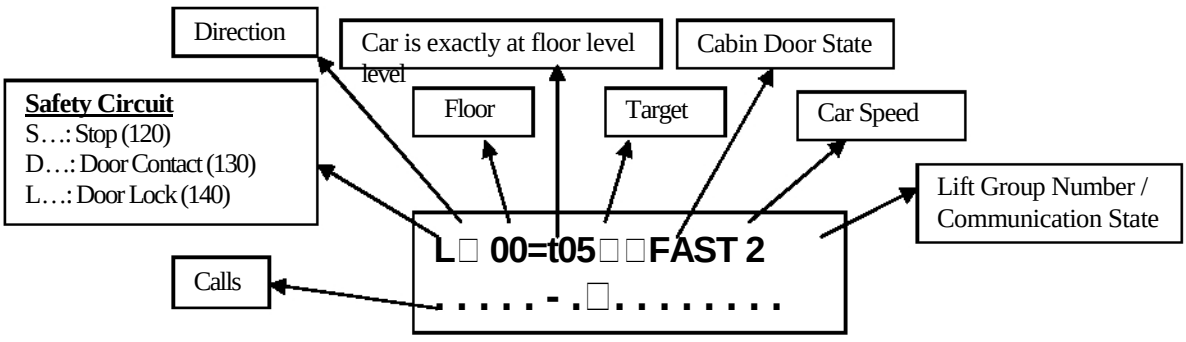
S-2 : Group member, group number is 2 and cannot communicate with the other members.

I-3 : Group number is 3. It has no group job (Idle) because cannot communicate with any group member.

b) ACH and ACT Series

```
K□ 00=INS□□ FAST.
........
```

The main screen shows the most important lift parameters briefly at one look.



TOP ROW:

1st character shows safety circuit state

- : Whole Safety Line is open.

S : **S**top circuit is closed.

D : Stop and **D**oor Contact circuits are closed.

L : Stop, Door Contact and Door **L**ock circuits are closed.

2nd character shows target direction

□ : Target is UP direction.

□ : Target is DOWN direction.

3, 4 and 5th characters show current floor and floor level

05= : Car is exactly at floor 5. (Car is exactly at floor level)

05 : Car is at floor 5. (Car is between floors)

6, 7 and 8th characters show target floor or Inspection

INS : Lift is in **INS**PECTION mode.

t__ : Lift has no target.

t03 : Lift has a target of Floor 3.

9 and 10th characters show the state of cabin door and CAM

□□ : Door is opening (CAM is active)

□□ : Door is closing (CAM is inactive)

11, 12, 13, 14 and 15th characters show speed and state of cabin

STOP : Car is stopping

START : Car is stopping but about to move. Lift is preparing conditions for moving (Closing door)

SLOW : Car is moving at slow speed

FAST : Car is moving at fast speed

HIGH : Car is moving at high speed (over 1m/s)

MAINT : Maintenance

16th character shows information about group operations. (Displays only in group lifts)

.: : Simplex operation

1- : Group manager, group number is 1 and cannot communicate with the other member

1+ : Group manager, group number is 1 and in communication with the other member

2- : Group member, group number is 2 and cannot communicate with the manager

2+ : Group member, group number is 2 and in communication with the manager

BOTTOM ROW

This row shows Call Registers. Most left character shows the calls for bottom floor. As moving right, floor number increases. One character is used for each floor. The meanings of symbols are explained below:

□̃ : No Call for this floor

□ : Cabin Call for this floor

□ : Up Call for this floor

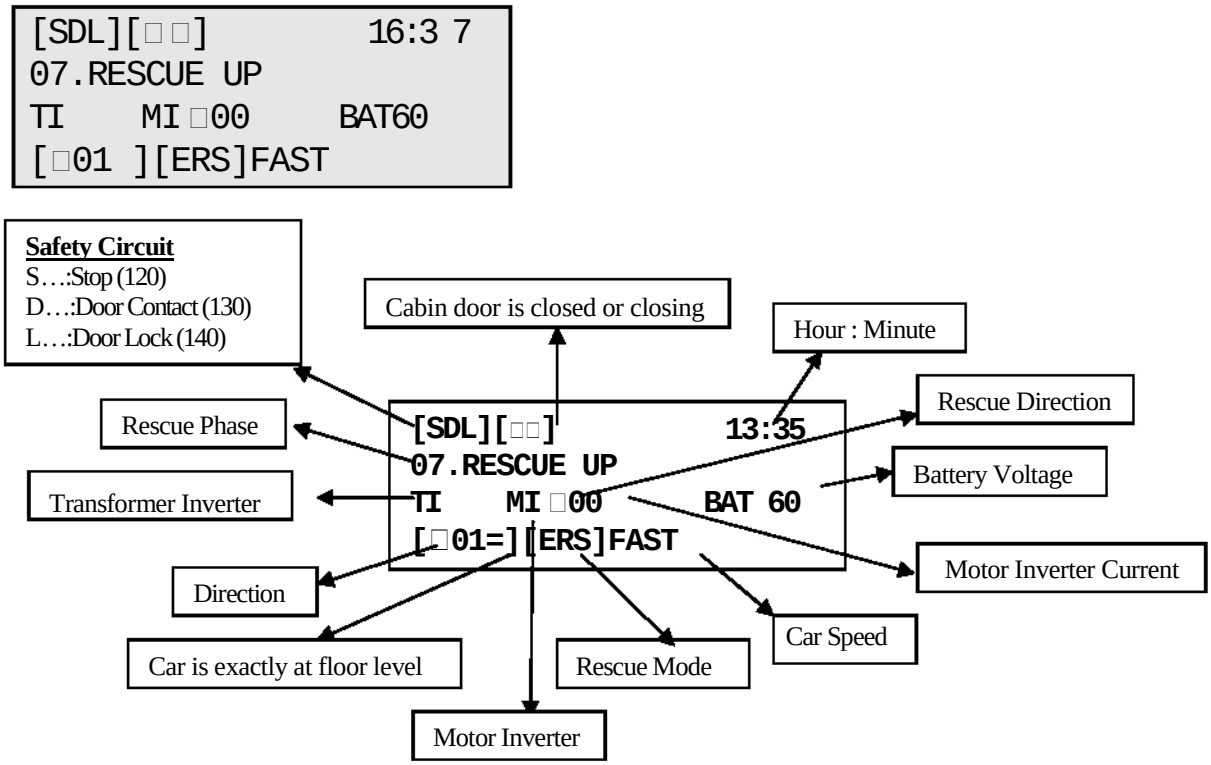
: Down Call for this floor

In a floor 1, 2 or 3 of these symbols can appear together at the same character (except □̃)

In these rows, only defined floor number of characters can be seen.

ii) ERS (EKS) MODE

a) ACS Series



TOP ROW:

[S]: **S**top circuit is closed.
[SD] : **S**top and **D**oor Contact circuits are closed.
[SDL]: **S**top, **D**oor Contact and Door **L**ock circuits are closed.

[□□] : Door is opening. (CAM is active.) **[□□]** :
Door is closing. (CAM is inactive.)

13:35 : Hour:Minute

ROW 2:

Row 2 shows rescue phase and errors.

ROW 3:

Column 2, 3 shows that the transformer inverter is running or not.
Column 7, 8 shows that the motor inverter is running or not.
Column 10 shows the rescue direction.
Column 11, 12 shows the motor inverter current value.
Column 15-20 shows the battery voltage value.

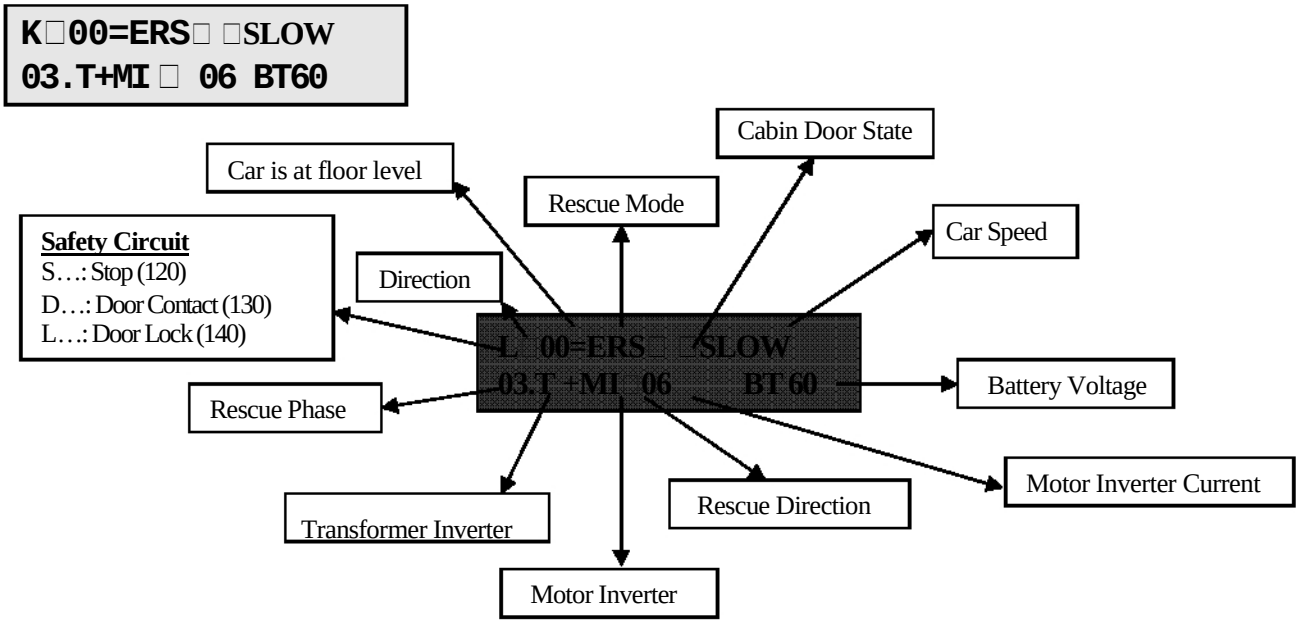
BOTTOM ROW:

Columns [2, 3, 4, 5] : This group shows information about floor and moving direction of car.
[01=] : Car is exactly at floor 1. (Car is exactly at floor level)
[01] : Car is at floor 1. (Car is between floors)
[□01] : Lift has a target on up direction.
[□01] : Lift has a target on down direction.

Columns [8, 9, 10] : This group shows information about target and run mode of lift.
[ERS] : Lift is in **Rescue** mode.

Columns 12, 13, 14, 15, 16 : This group shows information about motion and speed of car.
STOP : Car is stopping.
START : Car is stopping and preparing conditions for moving. (Closing door)
FAST : Car is moving at fast speed.

b) ACH and ACT Series



T$_S$OP ROW:
1 t character shows safety circuit state
- : Whole Safety Line is open
S : **S**top circuit is closed
D : Stop and **D**oor Contact circuits are closed
L : Stop, Door Contact and Door **L**ock circuits are closed

2nd character shows target direction
□ : Target is UP direction
□ : Target is DOWN direction

3, 4 and 5th characters show current floor and floor level
05= : Car is exactly at floor 5. (Car is exactly at floor level)
05 : Car is at floor 5. (Car is between floors)

6, 7 and 8th characters show target floor or Inspection
ERS : Lift is in **RESCUE** mode.

9 and 10th characters show the state of cabin door and CAM
□□ : Door is opening (CAM is active) : Door
□□ is closing (CAM is inactive)

11, 12, 13, 14 and 15th characters show speed and state of cabin
STOP : Car is stopping
START : Car is stopping and preparing conditions for moving. (Closing door)
SLOW : Car is moving at slow speed

BOTTOM ROW
1, 2 and 3rd characters show the rescue phase
03. : Rescue Phase 3

4 and 5th characters show the state of transformer inverter
T+ : Transformer inverter is on
T- : Transformer inverter is off

6, 7, 8, 9 and 10th characters show the motor inverter direction and current
MI 06 : Motor inverter direction is up and current is 6 A

13, 14, 15 and 16th characters show the battery voltage
BT60 : Battery voltage is 60V

1-C) MONITORING OF INPUTS

i) GENERAL SCREENS

On the main screen only important variables are shown. When you press (□) button when the screen is main screen then you will see the following screen:

ACS Series

120*	130 *	140	FKK *
817 *	818*	PTC*	CNT*
MK_	MKU	ML1	ML2
M0_	M1_	K20	DTS

ACH and ACT Series

120*130*140 FKK*
817*818*PTC*CNT*

Pressing (□) button when you see the main screen is the shortcut for the section (M1-VARIABLES N4-INPUTS). This section monitors all inputs. You can see number of codes with three characters with a '*' just after some of them. These codes represent an input and are listed below in a table. The inputs which have a '*' on the right side are active at the moment where the others are not active. For example on the screen we see that 120 and 130 are closed where 140 (door locks) are open. To switch to the second screen you can use (□) button. Second input screen is shown below.

ACS Series

869	500	501	804
870	550	551	805
FOT	FR1	802	DER
THR_	LDB_	WTM	DIK

ACH and ACT Series

MK_ MKU ML1 ML2
M0_ M1_ K20 DTS

To return back to the previous screen (□) button is available.

Besides these two input screens you can switch more screens in these sections. Next coming screens show inputs with their programmed terminal number together. Shortly you can switch with (□) and (□) buttons between available input screens in this section.

Only 13 inputs are constant in the system. You cannot redefine or change the terminal of the following inputs: 120, 130, 140, 870, 817, 818, CNT, T1-T2, MK/MKD, MKU, ML1-ML2, 550 and 551. All other inputs must be programmed by the user according to the needs of the system. Any required input can be selected from the available inputs in the list below and can be connected to the terminal. The following list gives the input codes and their explanations.

INPUT NO	INPUT CODE	EXPLANATION	DEFINITION
	120	Stop Circuit	STANDARD
	130	Door Contact Circuit	STANDARD
	140	Door Lock Circuit	STANDARD
	870	Inspection switch in the lift controller	STANDARD
	817	High Speed Limit Downwards	STANDARD
	818	High Speed Limit Upwards	STANDARD
	CNT	Contactor failure detection	STANDARD
	MK/MKD	Stopper and door zone limiter	STANDARD
	MKU	Stopper in up direction when two stoppers are selected in A10. M2-PARAMETERS □P1-MAIN.PRMs.□A10-TWO STOPPERS must be 1.	STANDARD
	550	Inspection Down Button	STANDARD
	551	Inspection Up Button	STANDARD
	T1,T2	Thermistor Inputs	STANDARD
	ML1,ML2	Shalter which determines the leveling zone	STANDARD
1	M0_	1) Counter in one shalter system (A05=0) 2) Counter in down direction in two shalter system (A05=1)	USER
2	M1	Counter in up direction in two shalter system (A05=1)	USER
3	869	Car top inspection switch	USER
4	K20	Door 1 Open Button Door	USER
5	DT	1 Close Button	USER
6	S	Photocell 1	USER
7	FOT	Overload contact	STD/USER
8	804 FR1	Fire 1 detector When a signal is present at this input then the system switches to the fire mode and moves to the fire floor stored in the parameter: M2-PARAMETERS□P2-AUX. PRMs.□ B05 FIRE FLOOR	USER
9		Full Load Contact	USER
10	805	Waitman Switch	USER
11	WTM FR2	Fire 2 detector When a signal is present at this input then the system switches to the fire mode and moves to the fire floor stored in the parameter: M2-PARAMETERS□P2-AUX. PRMs.□ B42 FIRE FLOOR 2	USER
12		Inspection Down Button	STD/USER
13	500	Inspection Up Button	STD/USER
14	501 RUN	Run feedback RUN can be used as a feedback from the motor driver. The system waits for a delay defined in (M2-PARAMETERS□ P3-TIMINGS□ C21-WAIT FOR MOTION) just after sending move command. If no signal at terminal, which defined as RUN until the end of this time limit then an error with the number 38 is generated and system is stopped. If [C21] is 0 then no error is generated.	USER
15		Door 1 open limit input. It means door 1 is completely open.	USER
16	DL1	Door 2 open limit input. It means door 2 is completely open.	USER
17	DL2	Door 2 Open Button	USER
18	K22 DT2	Door 2 Close Button	USER

19	FT2	Photocell 2	USER
20	DOB	When two doors are present and M2-MAIN PRMs□P2-AUX.PRMs□B18-TWO DOORS SELECTION is 1, which is "TERMİNAL INPUT" then this input functions as the control input for door B. In this case, if DOB has a signal then door B will be opened after a door open command.	USER
21	DOA	When two doors are present and M2-MAIN PRMs□P2-AUX.PRMs□B18-TWO DOORS SELECTION is 1, which is "TERMİNAL INPUT" then this input functions as the control input for door B. In this case, if DOA has a signal then door A will be opened after a door open command.	USER
22 23	SIF SIS	These inputs are not used in lift application. SIS and SIF are designed to be used as control inputs for lift simulator operation. Contact technical support department to run the lift in simulator mode without connected to a lift.	USER
24	DER	Driver Device Failure When the lift motor is managed by an external device, then the fault contact of this external device can be fed to the DER input. If used any motion is stopped when there is an active signal in DER input.	USER
25	FDT	This input terminal is used in variable speed applications in order to detect the speed when it is below a certain level.	USER
26	HD	High speed limit down	USER
27	HU	High speed limit up	USER
28	EMA	This input is for detecting the current level of speed regulator device for emergency rescue operation. This information is used in determining the direction of rescue operation. Any signal in this input during the direction test period of the emergency rescue operation means that the current level is above the set value in the tested direction so the opposite direction should be selected for easier rescue operation.	USER
29	LDB	This input is used to hold automatic door open for long times during loading and it is independent from photocell and door-open push-button. Holding time is set by parameter C31:LOADING PERIOD.	USER
30	802	Minimum Load Contact	USER
31	FRM	Fireman switch	USER
32	EKS	If this input is active and FKK input is passive at startup, system starts in Rescue mode.	USER
33…35	M2…M4	Floor Selector Gray Code Inputs. Active when A05=4 (GRAY CODE)	USER
36	DIK	Door Inspection Key Input which detects automatic landing door is opened manually by a key. When this normally closed input is opened, system passes to inspection mode automatically.	USER
37	THR	Machine Room temperature control input. Normally closed. When the temperature is between defined limit this input must be activated by an external temperature measuring device.	USER
38	FKI	External Phase Control Input	USER
39	DPM	Earthquake Alarm Input	USER
40	555	Fast Inspection Motion	USER
41	FRC	Fireman Car Key Input	USER
42	AGS	GSM Reporting Alarm Input	USER
43	RDY	System is Ready Input (For NGV A3)	USER
44	CAL	Calls in System Input	USER
45	UCM	UCM Device Error Input	USER
46	MKU	MKU Input	USER

47	VP1	When a signal is present at this input then the system moves to the VIP-1 floor stored in the parameter: M2-PARAMETERS□P2-AUX. PRMs.□ B55 VIP1 FLOOR	USER
48	VP2	When a signal is present at this input then the system moves to the VIP-2 floor stored in the parameter: M2-PARAMETERS□P2-AUX. PRMs.□ B56 VIP2 FLOOR	USER
49	VP3	When a signal is present at this input then the system moves to the VIP-3 floor stored in the parameter: M2-PARAMETERS□P2-AUX. PRMs.□ B57 VIP3 FLOOR	USER
50	BR1	Brake Contact 1	USER
51	BR2	Brake Contact 2	USER
52	SGC	Overspeed Governor Contact (Normally Closed)	USER
53	SGO	Overspeed Governor Contact (Normally Open)	USER
54	WM2	Waitman 2 Key Input. Hall calls must be registered by Waitman in cabin. (Only in parallel system).	USER
55	DSB	Out of service (Relevelling is still fuctional)	USER
56	917	Bottom Level Limit (When [A05] = 3 or 4 and [A18] = 1)	USER
57	918	Top Level Limit (When [A05] = 3 or 4 and [A18] = 1)	USER
58	BAT	ERS system battery voltage level is OK	USER

i) INPUT TERMINAL SCREEN

Due to its flexible structure, the input terminals of AC Series control system are distributed to a number of boards. The places of these terminals are listed below.

INPUT NO	PLACE / SOCKET	BOARD NAME TENAMNAL	
I0, I5		RMI	
			E
I1…I4	PANEL / TERMINAL	ACS/ACH/ACT	I0, I5
I6…I8	PANEL / TERMINAL	INP	I1…I4
I9…I12	PANEL / TERMINAL	ACH/ACT	I6…I8
K1…K8	PANEL / TERMINAL	CIN	I9…I12
K9…K16	CAR / TERMINAL	SCC/ACC	K1…K8
	CAR / TERMINAL	ACC (INP)	K9…K16

When (□) button is pressed on the main screen or entered to the section (M1-VARIABLES□N5-INPUTS) then a number of screens which show the inputs are present. First two of them are for a quick view for states of all inputs. There are more screens which show the input terminals.

You can switch between screens with (□) and (□) buttons.

1) CONTROLLER INPUTS

In this screen you will see the inputs.

ACS Series

```
CONTROLLER INPUTS
0-M0_ 3 -501
1-MK_ 4 -500
2-869 5 -804
```

ACH and ACT Series

```
T  0-M0_ 2 -869
1  1 -MK_* 3 -501
```

2) CAR INPUTS

ACS Series

```
CAR INPUTS 1
1-M0_ 4 -500    7 -DTS
2-869 5 -804    8 -___
3-501 6 -K20
```

ACH and ACT Series

```
K  1 -M0_ 3 -501
1  2 -869* 4 -500
```

This screen is visible only if serial communication with car has been established. It means that the parameter [A09] (M2-PARAMETERS□P1.MAIN PRMs□ A09-COMMUNICATION METHOD) must be '1' or '2'. The numbers on this screen represent the input terminals of car board.

1-D) DEFINITION OF INPUTS

i) DEFINE ALL IN ONE STEP

All programmable input terminals can be defined one by one. However, another facility is to program all input terminals in one step. In order to that, the menu at M2-PARAMETERS □P9-UTILITIES□R3- SET INPUTS can be used. It is recommended to use this utility when you want to organize the inputs as the first time. In case you want to change any single input terminal then it is better to do it as explained in the following section.

ACS Series

```
>G1 -PARALLEL        M33
 G2 -SERI AL CAR
 G3 -FREE ALL
```

ACH and ACT Series

```
>G1 -PARALLEL
 G2 -SERIAL CAR
```

The jobs of the selections are as follows:

G1-PARALLEL:
All inputs are organized as parallel connection system.

G2-SERIAL CAR :
All inputs are organized as car serial connection system.

G3-FREE ALL
All programmable input terminals are cleared to free input.

ii) SETTING OF INPUT TERMINALS

To modify the setting of an input terminal, first the screen on which the terminal is shown must be selected. For example, assume that we want to change the settings of the terminals on the INP board on main board. Firstly, we must bring CONTROLLER INPUTS / T1 on to the screen as shown below.

ACS Series

```
CONTROLLER INPUTS
0-M0_ 3 -501
1-MK_* 4 -500
2-869 5 -804
```

ACH and ACT Series

```
T1 0 -M0_ 2 -869
    1-MK_* 3 -501
```

When you see the screen above, then press ENT button. You will enter into the programming mode and the selected terminal is pointed by '>' character.

ACS Series

```
CONTROLLER INPUTS
0>M0_ 3 -501
1-MK_* 4 -500
2-869 5 -804
```

ACH and ACT Series

```
T1 0>M0_ 2 -869
    1-MK_* 3 -501
```

You can select any terminal by using (□) and (□) buttons. When 'M0' is selected and we press (□) button then the terminal 'MK' which is just below 'M0' will be selected as shown below.

ACS Series

```
CONTROLLER INPUTS
0-M0_ 3 -501
1>MK_* 4 -500
2-869 5 -804
```

ACH and ACT Series

```
T1 0 -M0_ 2 -869
    1>MK_* 3 -501
```

To change the setting of any terminal, first find the input facility you want to connect to this terminal by tracing all possible inputs with (□) and (□) buttons. When you find the input you want for this terminal then press ENT button. Pressing ENT saves the data. You cannot connect any input facility, which is already used in any other terminal. If you attempt to do this then system warns you.

You can change any input terminal in all screens in this manner.

1-E) MAIN MENU

If you push ENT button on Main Screen, you will see the following Main Menu screen.

ACS Series

```
>M1 -VARIABLES          M00
 M2 -PARAMETERS
 M3 -ERROR LOG
 M4 -LANGUAGE/DiL
```

ACH and ACT Series

```
>M1 -VARIABLES
 M2 -PARAMETERS
```

We will see this kind of menus lots of times. The '□' (Pointer) character on most left column points a sub menu and if you want to enter pointed menu you must push ENT button. You can move '□' by using (□) and (□) up and down respectively. All menus in ACS Series have a menu number and this is shown at right top corner. The number of the Main Menu is M00 as seen above.

This menu has five sub-menus. In the first screen above you see only four of them. Use (□) button to see the others. By this way, cursor moves one row down at each push. If you push (□) button when the cursor at bottom row, all lines moves one row upper, the top line disappear and a new line comes from down as below:

ACS Series

```
 M2 -PARAMETERS         M00
 M3 -ERROR LOG
 M4 -LANGUAGE/DiL
>M5 -SERVICES
```

ACH and ACT Series

```
 M4 -LANGUAGE/DiL
>M5 -SERVICES
```

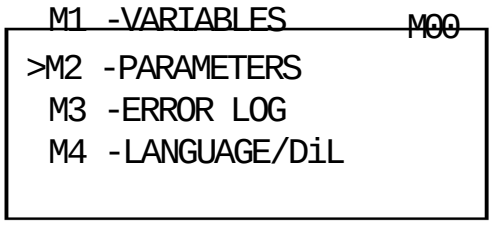
Instead of moving one step at each time you can use (□) button to see next four items and (□) button to see previous four items.

1-F) SETTING PARAMETERS

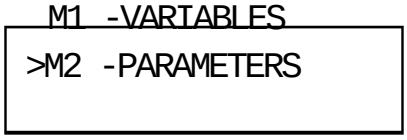
To see or change any parameter you must enter M2-PARAMETERS menu.

For example, let's set the parameter 'Number of Stops in System'. **At first, take the lift in inspection mode.**

ACS Series

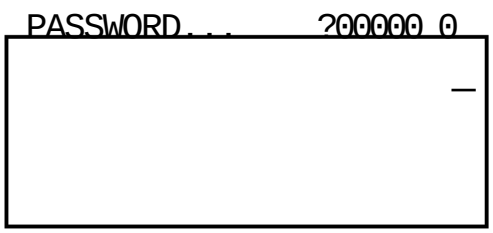


ACH and ACT Series

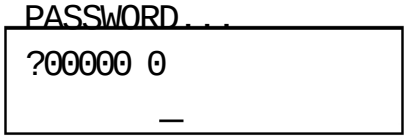


In Main Menu screen, use (□) and (□) buttons and when the pointer points 'M2-PARAMETERS' as above and push ENT button. If password is active, below screen appears. You cannot access parameters if you do not know password.

ACS Series

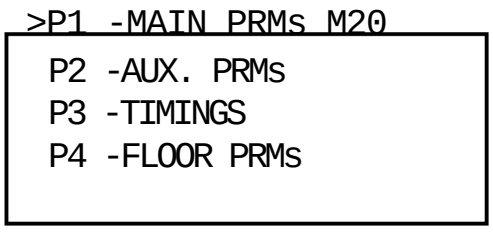


ACH and ACT Series

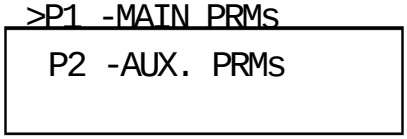


If you enter defined password or if password is not active, you will see M20 menu screen as below. When you enter password, you can access settings menu without any password entrance during 3 minutes.

ACS Series

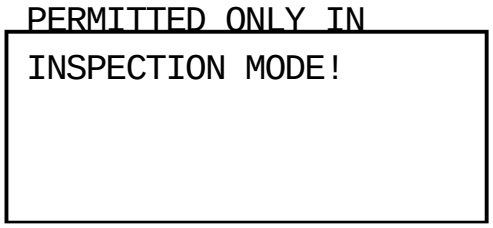


ACH and ACT Series

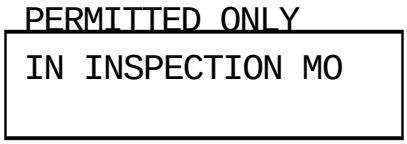


When arrow is at P1-MAIN PRMs. line, press ENT and below screen appears if system is not in inspection mode.

ACS Series



ACH and ACT Series



Push ENT button again when the pointer points 'P1-MAIN PRMs' as above and system is in inspection mode. Then you see the first 4 items of Main parameters as below. This menu has 15 items as A01…A15.

You can see other items by using arrow keys as described before. Some of the items in this screen are in abbreviated form. To see full form of any item, push ENT button when the pointer points it.

ACS Series

```
>A01 -NUM.OF STOPS:6
 A02 -COMMAND       :4
 A03 -LIFT TYPE     :2
 A04 -DOOR TYPE     :2
```

ACH and ACT Series

```
NUMBER OF STOPS
A01:6
```

Push ENT again to change the [A01] parameter.

ACS Series

```
A01 -NUMBER OF STOPS

?00000 6_
```

ACH and ACT Series

```
A01 ?00000 6_
```

Now, you see parameter change screen. In this type of screens, you always see six digit numbers. When you enter this screen firstly, cursor is always located under left most digit. You can increase or decrease value of the digit under which cursor is located by using (□) and (□) buttons respectively. You can move cursor to left and right by using (□) and (□) buttons.

In this screen, stored parameter data is 6 and cursor is located under digit (6). Now let us see some example about how to change value of a parameter.

```
?0000 06
      _
(□)
?0000 05
      _
(□)
?00000 4
       _
(□)
?0000 04
      _
(□)
?0000 14
      _
```

After setting the parameter, if you push ENT the new value on screen is saved. However if you push ESC, changes are cancelled. In both cases, you turn previous screen and see value of parameter.

Here we push ENT and see the following screen.

ACS Series

```
>A01 -NUM.OF STOPS:14
 A02 -COMMAND       :4
 A03 -LIFT TYPE     :2
 A04 -DOOR TYPE     :2
```

ACH and ACT Series

```
NUMBER OF STOPS
A01:14
```

So we have changed number of floor in system as 14 and this change is stored in memory.

On this screen, let us change another parameter 'A02-COMMAND SYSTEM'. This parameter is in abbreviated form as 'A02-COMMAND SYSTEM'.

ACS Series

```
>A01 -NUMBER OF S:14
 A02 -COMMAND SYS:4
 A03 -LIFT TYPE :2
 A04 -DOOR TYPE :2
```

(□)

```
 A01 -NUMBER OF S:14
>A02 -COMMAND SYS:4
 A03 -LIFT TY PE :2
 A04 -DOOR TYPE :2
```

(ENT)

```
A02 -COMMAND SYSTEM

?00000 4
FULL COLLECTIVE
```

(□)

```
A02 -COMMAND SYSTEM

?00000 3
UP COLLECTIVE
```

(□)

```
A02 -COMMAND SYSTEM

?00000 2
DOWN COLLECTIVE
```

(ENT)

```
 A01 -NUMBER OF S:14
>A02 -COMMAND SYS:4
 A03 -LIFT TYPE :2
 A04 -DOOR TYPE :2
```

ACH and ACT Series

```
NUMBER OF STOPS
A01:14
```

(□)

```
COMMAND SYSYEM
A02:4
```

(ENT)

```
FULL COLLECTIVE
A02?00000 4_
```

(□)

```
UP COLLECTIVE
A02?00000 3_
```

(□)

```
DOWN COLLECTIVE
A02?00000 2_
```

(ENT)

```
COMMAND SYS TEM
A02:2
```

Setting has been saved.

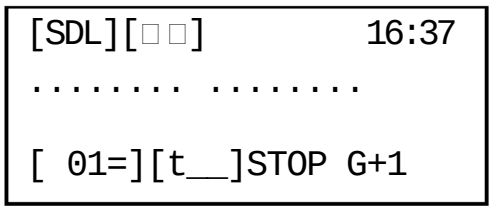
In the [A02] parameter change screens above, you see the information according to the value of parameter. You will see this type of information in some parameter change screens if changed parameter has a value of a type, system, shape etc. instead of number.

1-G) GIVING CALLS BY KEYPAD

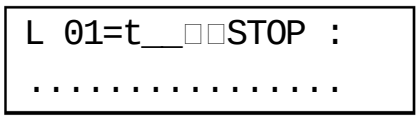
In AC Series, it is possible to give cabin call by using keypad when lift is not in inspection mode.

Here is an example.

ACS Series

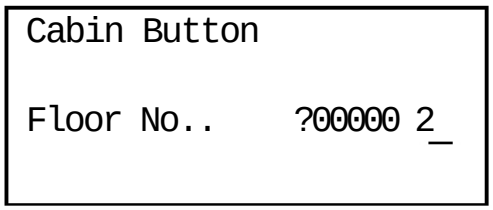


ACH and ACT Series



On Main Screen push (□)

ACS Series



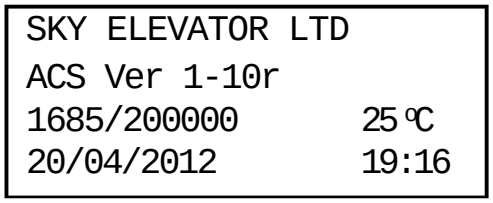
ACH and ACT Series

In this screen, you can change floor number with arrow keys and when you push ENT, a cabin call is given.

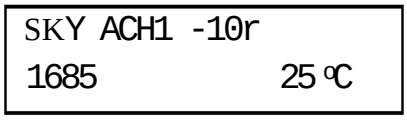
1-H) SOFTWARE VERSION NUMBER

To see software version of your system on Main Screen, push and hold ESC. You see the following screen.

ACS Series



ACH and ACT Series



Here '1-10r' shows software version of your system. Whenever you report any problem about lift operation then please always send information about software version you are currently using. You can also see date and time in this screen. When you release ESC button, system turns to Main Screen.

CHAPTER 2:
PARAMETERS

All information about lift and control system settings and timings are stored in system parameters. These parameters are classified into several groups to make it easy for users. These groups are:

- **P1-MAIN PARAMETERS :** These are the most important and necessary parameters for lift to function properly. (Axx)
- **P2-AUXILIARY PARAMETERS :** This group includes secondary parameters for lift and the parameters about control system working conditions. (Bxx)
- **P3-TIMINGS :** These are timing parameters for lift. (Cxx)
- **P4-FLOOR PARAMETERS :** These are the parameters that can have different value for each floor.
- **P5-MAINTENANCE :** This is the date at which system requires maintenance.
- **P6-OUTPUT DEFINITION :** This parameters control user-defined relay outputs.
- **P7-INPUT DEFINITION :** This parameters control user-defined inputs.
- **P8-DATE/TIME :** Setting Real Time Clock and date.
- **P9-UTILITIES :** Some service routines.
- **P0-MAX-START :** Allowed number of maximum start of lift until next maintenance time.
- **PA-LIFT NO :** Lift number.

2-A) P1-MAIN PARAMETERS

System must set to inspection mode before any parameter changes!

[A01] NUMBER OF STOPS

2…64	This parameter stores the number of stops in lift system. When using parallel communication, be sure to have required I/O boards (IO) connected to the system for the selected command system in [A02]. Otherwise, no call is considered.

[A02] COMMAND SYSTEM

0	Simple Push Button Car and hall call buttons are tied together. There is no call register memory. No second call is registered when the system deals with a call. No group operation is allowed. Hall calls are not allowed in busy state. (Only in parallel system)
1	Simple Collective Car and hall call buttons are tied together. Call register memory is present. There is no difference between hall and car calls. No group operation is allowed. (Only in parallel system)
2	One Button Down Collective Car and hall call buttons are connected separately. Car calls are collective in both directions where hall calls are collective when the lift moves downwards. This configuration is useful in residential buildings where the main entrance is in the base floor. Group operation is allowed.
3	One Button Up Collective Car and hall call buttons are connected separately. Car calls are collective in both directions where hall calls are collective when the lift moves upwards. This configuration is useful in residential buildings where the main entrance is in the top floor. Group operation is allowed.
4	Two Buttons Full Collective Car, up and down hall buttons are connected separately. Car and landing calls are all serviced in full collective manner. Group operation is allowed.

[A03] LIFT TYPE

1	One Speed Rope Lift *(Only in ACT/ACS Systems)*
2	Two Speed Rope Lift *(Only in ACT/ACS Systems)*
3	Hydraulic Lift *(Only in ACH System)*
4	VVVF1 *(Only in ACT/ACS Systems)*
5	VVVF2 *(Only in ACT/ACS Systems)*
6	FUJI Closed Loop *(Only in ACT/ACS Systems)*
7	RST *(Only in ACT/ACS Systems)*
8	VVVF3 *(Only in ACT/ACS Systems)*
9	KEB *(Only in ACT/ACS Systems)*
10	DIETZ *(Only in ACT/ACS Systems)*
11	FUJILIFT *(Only in ACT/ACS Systems)*

[A04] DOOR TYPE

0	Wing Door Semi-automatic wing landing door, no cabin door
1	Wing+Cabin Door Semi-automatic wing landing door with automatic cabin door
2	Full Automatic Door Full automatic cabin and landing door

[A05] FLOOR SELECTOR SYSTEM

0	Counter Mono-stable Shalter
1	Counter 1 Shalter (Only M0)
2	Counter 2 Shalters (M0 and M1)
3	Incremental Encoder
4	Absolute Encoder
5	Gray Code

[A06] PREOPENING DOORS

0	No Doors are opened after motor has been stopped and brake has been released.
1	Yes Doors are opened when the car entered the door zone of the target floor with a speed less than 0.3 m/s. This operation is allowed only by using the special door bridging circuit SLB board. ML1 and ML2 shalters must be employed to get information about the door zone. The wiring and associated parameters are explained on the diagram of SLB board. *(SLB is needed only with ACT/ACS)*
2	Yes (No FDT) *(Only in ACT/ACS Systems)*

[A07] LEVELING

0	No
1	Open Door/Mot+
2	Closed Door/Mot+ *(Only in ACH System*
3	Open Door/Mot- *(Only in ACH System*
4	Closed Door/Mot- *(Only in ACH System*

[A08] NUMBER OF DOORS IN CABIN

1	1 Door
2	2 Doors Make your selections of driven doors for each floor in M2-PARAMETERS □ P4-FLOOR PRMs. □ K2 and K3

[A09] CONTROLLER-SHAFT COMMUNICATION

0	Parallel *(Only in ACH/ACT Systems)* Parallel communication between controller and car/landing panels. One to one cable is connected between controller terminals and signals or buttons.
1	Car Serial *(Only in ACH/ACT Systems)* Serial communication between lift controller and car. Landing panels are connected as in parallel mode.
2	Serial Full serial communication between lift controller, landing panels and car.

[A10] NUMBER OF STOPPERS

0	1 Stopper (MK) *(Only in ACH/ACT Systems)*
1	2 Stoppers (MKU and MKD) If lift type is selected as hydraulic ([A03]=3) where the driven force in up and down directions is different then the system automatically uses this selection. This option may also be used in other lift types besides hydraulic.

[A11] HIGH SPEED *(Only in ACT/ACS Systems)*

0	No
1	Use 3th. Speed HIGH *(Only in VVVF)* This option is used in variable speed lifts where the car speed exceeds 1m/s. In this case, the lift has slow, fast and high(3th. speed) speeds. When this case is selected then HU shalter must be placed one floor below the top floor and HD shalter must be placed one floor above the base floor. The purpose of these shalters is to slow down the car from high speed (3th. speed) to intermediate speed (fast speed) in order to prevent the car to enter last floors of the shaft with a speed above 1.6 m/s or higher. If this case is selected without connecting HU and HD then an error message (21) is reported.
2	Use 4th. Speed ULTRA *(Only in VVVF)* It is active only when [A18] = 1

[A12] SIMPLEX/GROUP

0	Simplex The lift works alone.
1	Group The lift works in a group of lifts.

[A13] GROUP NUMBER

0…7	Lift group identifier. Each lift in the group must have a unique identifier between 0…7. The one which has smallest number as identifier manages the network and responsible for reading call buttons and driving call register lamps.

[A14] MISSING FLOOR BELOW (GROUP LIFT)

0…5	The difference of the base floor to the lowest floor in the group.

[A15] MISSING FLOOR ABOVE (GROUP LIFT)

0…5	The difference of the top floor to the highest floor in the group.

[A16] ENTRANCE FLOOR

0…8	When there are some stops under entrance floor such as basement or garage, set this parameter that is valid only if command system is down collective (A02=2). The calls over entrance floor are collected during down travel and the calls under entrance floor are collected during up travel.

[A17] UCM CONTROLLER

0	Not Present
1	GMV NGV - A3
2	BUCHER DSV - A3
3	Gearless
4	Speed Governor 1 (Monitoring both SGO and SGC inputs)
5	BLAIN L10 - A3
6	Speed Governor 2 (Monitoring only SGO input)
7	GMV 3010 DLV-A3
8	BUCHER iValve

[A18] TARGET DISTANCE

0	Floor Number When ([A11]=1 and target is 2 stops or more then lift starts in HIGH speed and passes to SLOW speed when it reached the target.
1	Distance Controller calculates total distance to the target considering the parameters K7-GENERAL PULSES> MIN.WAY-3, MIN.WAY4 and DECCELERATION-2. It chooses starting speed according to [A11] parameter. For deceleration K7-GENERAL PULSES> DECC.-2, DECC.-3 and DECC.-4. parameters are taken into account.

[A19] HOMELIFT

0	NORMAL LIFT
1	HOMELIFT

2-B) P2-AUXILIARY PARAMETERS

[B01] AFTER LOCK FAILURE

0	Continue The system continuous operation
1	Block When Repeated The system is blocked if the number of consequent errors has been repeated as the number stored in the parameter [B12].
2	Clear Registers All call registers are cleared.
3	Block+Try Again The system is blocked if the number of consequent errors has been repeated as the number stored in the parameter [B12]. System returns normal mode after 5 minutes.

[B02] ERROR REPORT

0	Single Line Report When an error occurs, the current screen is not left. Only when the screen is the main screen then a flashing message about the error is displayed. The details can be analyzed in M3-ERROR LOG
1	Full Screen Report When an error occurs, the current screen is left and error screen is displayed where all the information about the error is given. After a few seconds of display time, previous screen restored.

[B03] PARK DEFINITION

0	No Park Floor No park floor is defined.
1	Park Floor Door Closed When the lift is in park at this floor then it will wait there with closed doors.
2	Park Floor Door Open When the lift is in park at this floor then it will wait there with open doors. (Not conformity with EN81-1 and EN81-2)

[B04] PARK FLOOR

0…63	Park floor number. When [B03] is 1 or 2 and the lift has no calls about the time defined in [C02] then lift moves to this floor and stays there until a call comes with the door opening state specified in [B03].

[B05] FIRE FLOOR 1

0…63	Fire floor no. When the fire input of the lift is activated then the car immediately moves to this floor.

[B06] MAXIMUM CABIN CALLS

1…64	Maximum number of allowable cabin calls.

[B07] BREAKPOINT CODE

0	Only for service of the operating system. Leave it as 0.

[B08] CONTINUE ON ERRORS

0	No The system stops after all errors.
1	Yes The system continues its operation after some simple errors, which are not about safety circuit or related with car motion.

[B09] WAIT DOOR OPEN

0	Wait With Open Door Car waits with closed doors in floor for automatic doors.
1	Wait With Closed Door Car waits with open doors in floor. (Not conformity with EN81-1 and EN81-2)

[B10] REMOTE REPORTING

0	Not Activated
1	PC
2	GSM SMS After an error, system sends a SMS to defined phone number.
3	GSM CALL After an error, system calls defined phone number and after 5 second hangs up the line.
4	ERR > CALL ALR > SMS System calls defined phone number in case of an error and sends SMS on Alarm.
5	ERR > SMS ALR > CALL System sends SMS to defined phone number in case of error and calls on Alarm.

[B11] LANGUAGE

0	Turkish/Turkce
1	English/İngilizce
2	German/Deutsch
3	Greek/Ellhnika
4	Russian/Россия

[B12] MAXIMUM ERRORS REPEAT

4…100	Whebeanyoerrornwhtih paraerreorrctode 7, 8,sy27,em bl34,ke5, 36, 37, 38 and 41 is repeated as the

[B13] SERIAL PORT 1

0	Closed
1	PC Communication
2	GSM MODEM
3	ERS

[B14] SERIAL PORT 2 *(Only in ACS System)*

0	Closed
1	PC Communication
2	GSM MODEM
3	ERS

[B15] SERIAL PORT 3 *(Only in ACS/ACT System)*

0	Closed
1	PC Communication
2	GSM MODEM
3	ERS

[B16] SERIAL PORT 4 *(Only in ACS System)*

0	Closed
1	PC Communication
2	GSM MODEM
3	ERS

[B17] HALL CALLS INHIBIT

0	Hall Calls Allowed
1	Hall Calls Inhibited

[B18] TWO DOORS SELECTION

0	Not Used The parameters given in Floor Parameters section are valid for door selection at each floor.
1	Terminal Input The door to be opened at each floor is determined by the programmable inputs, DOA and DOB.

[B19] AFTER STOP FAILURE

0	Continue System continues to work.
1	Clear Registers All of the call registers are cleared and the system continues to work.

[B20] INSPECTION SPEED

0	Fast (Hydraulic) Inspection speed is high speed. *(Only in ACH System)*
1	Slow
2	Only Direction When there is a motion command in inspection mode then only direction command is sent, neither slow nor high speed is activated.

[B21] THERMOMETER

0	No Temp. Control
1	Onboard Detector
2	THR Input

[B22] INSPECTION SWITCH

0	Closed contact in inspection mode.
1	Open contact in inspection mode.

[B23] PTC CONTROL

0	OFF
1	ON

[B24] PHASE CONTROL

0	OFF
1	Onboard
2	FKI Input

[B25] HYDRAULIC STOP STYLE *(Only in ACH System)*

0	Valve-Motor Delay In hydraulic lift operation, when a stop command is processed then valves are deactivated immediately. Motor is stopped after a delay specified in parameter [C15].
1	Motor-Valve Delay In hydraulic lift operation, when a stop command is processed then motor is deactivated immediately. Valves are stopped after a delay specified in parameter [C15].

[B26] ERS MOTOR INVERTER *(Only in ACS/ACT Systems)*

0	Not Activated There is no motor inverter in emergency rescue operation.
1	Activated There is a motor inverter whose running direction is defined by contactors.
2	Activated-All Direction There is a motor inverter whose running direction is defined by EMD board itself.
3	APS+EMD UPS + Battery. Motor is driven by EMD board.

[B27] BACKLIGHT

0	Auto Off Energy saving mode. The backlight illumination of the LCD screen of the controller is switched of when not used.
1	Always On The backlight illumination of the LCD screen of the controller is always ON.
2	Always Off The backlight illumination of the LCD screen of the controller is always OFF.

[B28] GROUP REGION DEFINITION (Do Not Use)

[B29] HALF LOAD CURRENT (ERS) *(Only in ACS/ACT Systems)*

1…60	The current measured in emergency rescue operation where car load is one half of the nominal load.

[B30] MAXIMUM CURRENT (ERS) *(Only in ACS/ACT Systems)*

2…100	The maximum allowed current in emergency rescue operation.

[B31] ID CONTROL

0	Not Used
1	Cabin
2	Cabin+Controller
3	Cabin+Controller+PC

[B32] ERS MACHINE TYPE *(Only in ACS/ACT Systems)*

0	Gear
1	Gearless

[B33] ERS MOTOR FREQUENCY (Only for gearless machine) *(Only in ACS/ACT Systems)*

1… 5	EMD board 3-phase output frequency to drive gearless machine in Rescue mode.

[B34] MK SWITCH

0	Open at Floor
1	Closed at Floor

[B35] MK DELAY

0…50	This parameter is especially designed for VVVF and slow-speed pulley good lifts to set fine-tuning at landing level. It is the time after reading MK switch until stop. Parameter unit is 30 msec. Setting 0 disables the delay. Setting max. value of 50 causes 1.5 sec delay.

[B36] BLOCKING CONTROL

0	Blocking Allowed, Only in ERROR 45(Bridging Error).
1	Blocking Inhibited (Not conformity with EN81-1 and EN81-2) Only in ERROR 45(Bridging Error).

[B37] ENCODER RATIO

0…100	Encoder pulse divider ratio

[B38] CAR DISPLAY OUTPUT

0	7 Segment Display
1	Gray Code
2	Binary Code

[B39] HALL DISPLAY OUTPUT

0	7 Segment Display
1	Gray Code
2	Binary Code
3	Floor Signal

[B40] FIRE FLOOR 2

0…63	Fire floor 2 number. When the Fire 2 input of the lift is activated then the car immediately moves to this floor.

[B41] PRIORITY SYSTEM

0	Not Activated
1	Activated

[B42] MACHINE ROOM MINIMUM TEMPERATURE

0…10	Minimum working temperature

[B43] MACHINE ROOM MAXIMUM TEMPERATURE

30…60	Maximum working temperature

[B44] DATE AND TIME

0	Not Activated
1	Activated

[B45] ERS MK DELAY

0…120	MK delay in ERS mode

[B46] FIREMAN LIFT

0	EN81-73
1	EN81-72
2	EN81-72 Car Key

[B47] CAN0 OUTPUT SELECTION

0	Shaft Communication
1	Input Board CIN
2	Output Board EOR

[B48] CAN1 OUTPUT SELECTION

0	Group Communication
1	Input Board CIN
2	Output Board EOR

[B49] CAN2 OUTPUT SELECTION *(Only in ACS System)*

0	CAN Communication
1	Input Board CIN
2	Output Board EOR

[B50] LIMITS OF MOTION IN INSPECTION

0	High Speed Limit
1	Floor Level

[B51] BUTTON FAULT CONTROL

0	Not Activated
1	Activated

[B52] VVVF LEVEL SPEED

0	Slow Speed
1	Special

[B53] DIRECTION ARROWS

0	Direction
1	Next Direction

[B54] HYDRAULIC TOP STOP FAULT

0	Activated
1	Not Activated

[B55] 1st. VIP FLOOR

0…63	When the VP1 input of the lift is activated then the car immediately moves to this floor.

[B56] 2nd. VIP FLOOR

0…63	When the VP2 input of the lift is activated then the car immediately moves to this floor.

[B57] 3th. VIP FLOOR

0…63	When the VP3 input of the lift is activated then the car immediately moves to this floor.

[B58] SPEED GOVERNOR COIL

1	On In Motion
2	Always On
3	Always On+Sleep

[B59] UCM CHECK TYPE

1	Starting Count
2	Daily Control

[B60] DOOR RELAY OUTPUT (KA, KK relays on mainboard)

0	Door Relays (Drives 1st. Door)
1	Programmable

[B61] RESETTING SHALTER

0	Not Used
1	Terminal Input

[B62] ERS LAST STEP

0	Door Opening At the end of rescue operation door is opened.
1	Door Closing At the end of rescue operation door is closed.

[B63] LCD 2nd.CHAR SET

0	Japanese (Standard)
1	Russian (Cyrillic)

[B64] UCM ERROR BLOCK

0	Blocking Allowed, Block the system in case of UCM Errors (64,68,69 and 72)
1	Blocking Inhibited **(Not conformity with EN81-1/2+A3 Norm)** Don't Block the system in case of UCM Errors (64, 68, 69 and 72)

2-C) P3-TIMINGS

In all of the C type parameters (timings), one unit corresponds to 0.1 sec.

[C01] BUSY PERIOD

20…999	Busy period in which cabin light and Busy output (12) are activated.

[C02] PARK WAIT TIME

0…9999	This parameter stores the period of the car to move park floor.

[C03] OPEN WAIT PERIOD

0…500	This parameter stores the period of the automatic door to wait open before closing.

[C04] DOOR OPEN PERIOD

0…999	This parameter stores the period of the automatic door to open.

[C05] DOOR LOCK WAIT PERIOD

0…999	Thicshecrkimetlerc stotreersmtihealp140) aoferthe autcomsaeticcommrano.close. This parameter is controlled

[C06] IN FLOOR WAIT PERIOD

20…999	Tolilsecpavemyesteermsst.ores the period of the car to wait before departing for the next call in

[C07] STARTUP DELAY

0…100	It stores the time delay of the car to wait before departure after lock contact is closed.

[C08] FAST MAXIMUM PERIOD

0…9999	This parameter stores the maximum time allowed to pass without changing the current floor number when the car is in fast or high speed (in 3 speed systems). When this timer overflows, then an error is generated and the system is blocked.

[C09] SLOW SPEED MAXIMUM PERIOD

0…999	Thhen trasmteterrstoversftowsmahemumetrraoveilstimnealltowed tothe ss swehenistheoccakeis.in slow speed.

[C10] ARCH TRAVEL

0…999	Dessiperid forfthdoeyst'em wsherroemhe distsapneceedbtetweenstpeods.tops is very short. At startup, during

[C11] GROUP DOOR OPEN WAIT PERIOD

6…999	When the lifts work in group, then this parameter specifies the maximum time period in which ahliisftpcanod, td a hhaallll ccaallll iasslietst tarregeetwahereits ndoortshearremfemcbedr tofsttay opoup Aftnertatike

[C12] BRAKE DELAY TIME

0…100	BrogreammlayleinelAyCVor sandctVVVuFmsyst18.s. This parameter defines the time delay of

C13] MOTOR VALVE DELAY TIME *(Only in ACH System)*

0…99	This parameter determines the delay time between the motor starts to run and the valves are activated in hydraulic lifts in startup.

[C14] STAR DELTA SWITCHING PERIOD *(Only in ACH System)*

0…99	This parameter determines the switching time of the motor from star connection to delta connection in hydraulic lifts in startup.

[C15] VALVE MOTOR DELAY TIME *(Only in ACH System)*

0…99	This parameter is used only in hydraulic lifts and determines the delay time between valves and the motor (or vice versa) after a stop command. See parameter [B25] for better understanding.

[C16] MAXIMUM BUSY TIME

0	Inactive
1…30000	Ifa the ldoorsaraereflfeft oipennerwccaannost celoseveuring a period of [C16] then the busy signal and

[C17] PAWL MOTION UP

0…999	Thiesctponi.od specifies the period of special pawl up motion when the lift starts for any er

[C18] PAWL LOCK WAIT

0…999	The maximum waiting period after energizing the PAWL device until SKN is read ON.

[C19] PAWL PRESSURE WAIT

0…999	Tthetmaximumopfetrhe lifo.r KNB to be read as ON after starting special PAWL motion in iod

ft

[C20] DTS BUTTON DELAY

0	Disabled
1…150	DTrSs (wheonr tcloserbutaton)sishenfhiooitred during the period given in this parameter. The period

[C21] MAXIMUM MOTION WAIT PERIOD

0…100	If there is no signal in programmable input with code 10 (RUN) within the time period specified in this parameter after a motion command is received, then the system is stopped. If RUN input is not defined then this timer is not active.

[C22] RETIRING CAM DELAY

0…160	Putriodattocdelsatymhe. activation of retiring cam after the landing door has been closed for semi-

[C23] LEVEL OVERFLOW

0…500	If the leveling process cannot be completed within the period specified in this parameter then an error (41) is generated and leveling in this floor is not allowed any more until the car moves to a different floor.

[C24] DOOR OPEN DELAY

0…35	Delay period of an automatic door to start opening after reaching the floor.

25] MAXIMUM ERS PERIOD

600…5000	Maximum allowed period of emergency rescue operation.

[C26] FAST DELAY TIMER

0…99	Delay period of the fast contactor to be activated during starting phase.

[C27] DIRECTION DELAY

0…110	Delay period to allow the direction to change after stopping.

[C28] MAXIMUM MOTOR TIME

200…3000	Maximutmsppairod ienewhichemhator450al(l45 eedct)oiswnortk.conformity with EN81 standards)

[C29] ERS DOOR OPEN PERIOD

20…300	Mraixiimum pleorood in which the door should be opened in emergency rescue operation after i

[C30] K20 PERIOD

6…200	Tchtiisvaperdiodt definesstehebeewiodno0.6uteomatid 8door.driven in open direction when K20 input is

[C31] K22 PERIOD

6…200	Tchtiisvpteerdiodt defninessthebeetrwodnof a6utsomaaticddooerc2 driven in open direction when K22 input is pi

[C32] LOADING PERIOD

0…9999	ItDBfiines the deefriinedduring whindep utomnttifcom photoceopen. Thisr-paprean pusrhis active when

[C33] ENCODER CONTROL

20…99	Encoder signal check period after last signal receive.

[C34] CONTACTOR DELAY

0…10	Star to delta connection pass delay.

[C35] PRIORITY PERIOD

300…3000	Priority wait period.

[C36] CAM DELAY

0…60	Cam delay period.

[C37] UPS-ERS DELAY

20…200	UPS delay period in ERS start mode.

[C38] AGS DELAY

100…9999	AGS input delay period.

[C39] EARLY DOOR DELAY

0…50	Early door delay period.

[C40] MAXIMUM OPEN STATE

0…3000	Maan tmum domretoepen period. Output 88 will be activated if door open state period is more o r.

[C41] GONG PERIOD

10…200	Period of gong signal output.

[C42] SPEED GOVERNOR STOP DELAY

0…80	Overspeed governor A3 coil releasing delay after stop.

[C43] ERS START WAIT

0…200	Waiting period to start motion in ERS mode.

[C44] PHOTOCELL PERIOD

20…500	Door-open wait period after receiving signal from photocell.

2-D) P4-FLOOR PARAMETERS

In this section, you can program the parameters of the system that may be different for each floor. We name these parameters as "Floor Parameter". In screen M20, item P4 is the selection for floor parameters. If you select P4 and press (ENT) key then the following screen is displayed.

ACS Series

```
>K1 -SET  DISPLAYS M24
 K2 -SET  DOOR A
 K3 -SET  DOOR B
 K4 -CAR  CALLS
```

ACH and ACT Series

```
>K1 -SET DISPLAYS
 K2 -SET DOOR A
```

Menu M24 consists of the following sections:

K1-SET DISPLAYS
K2-SET DOOR A
K3-SET DOOR B
K4-CABIN CALLS
K5-HALL CALLS
K6-FLOOR PULSE
K7-GENERAL PULSE
K8-CALL PERIODS

2-D-1) K1-SET DISPLAYS

In this section, you see the following screen:

ACS Series

```
 00.FLR  DIS PLAY:   -1
>01.FLR  DISPLAY:    0
 02.FLR  DISPLAY:    1
 03.FLR  DISPLAY:    2
```

ACH and ACT Series

```
 00.FLR DISP: -1
>01.FLR DISP: 0
```

When you select any floor by pressing (ENT) key, then you can enter the digital display data by using the following display input screen:

ACS Series

```
01.FLR DISPLAY:

LEFT:_      RIGHT..:0
. □□ SCAN CHARACTERS)
```

ACH and ACT Series

```
01.FLR DISPLAY:
LEFT:_ RIGHT:0
```

This screen is designed to set left and right digital characters. When you enter this screen first, the cursor is waiting just after 'LEFT:'. Here either you can skip this field by pressing (ENT) key and accepting the character shown there or select the character by using (□) or (□) keys. As you scan characters, all ASCII characters will be displayed one by one. You can select any of one you want to be displayed in car and landing panels. However, the hardware you are using to drive and display these characters limits the

characters you actually see on the displays. For example if you have 7-segment digital displays on your panels then you can see the characters of all digits from 0 to 9 and other characters like -, A, b, C, d, E, F, H, I, J, L, n, P, r, U, y. If you have such hardware in your system then you cannot see any characters like M or X on panels if you select them. However, if you have dot matrix displays and its driving hardware is connected in your system then you can actually display all characters you select in this section.

After you have chosen the character you want on the left display, press (ENT) key to go to the input field of the right display. You can select the right side display by using (□) or (□) keys as previous field. After you have chosen the character that you want on the right display, press (ENT) key to return back to previous menu.

By using the same procedure, you can specify all floor displays for your lift system.

This section is to change display data for any floor. However, if you want to reorganize your displays in an ordered manner, then you can use special utilities. You can go to this section from M20 menu P9-UTILITIES□R1-DISPLAY UTIL. In this utilities section the following screen is waiting for an input:

ACS Series

```
BASE FLOOR NO:

?00000 0_
```

ACH and ACT Series

```
BASE FLOOR NO:
?00000 0_
```

You can change the data by using (□) and (□) keys between 0 and maximum floor number. If you specify which floor is the entrance floor of the building, then this utility sets the digital display of the entrance floor (base floor) as 0. All floors above this floor are numbered starting 1 and incremented by 1 at every floor; all floors below 0 (base floor) are numbered starting -1 and decremented by 1 at every floor. If you have a regular display order in your system with a few exceptions then first use the utility explained above and then changes the data for exceptional floors one by one.

2-D-2) K2-SET DOOR A and K3-SET DOOR B

This section is designed to select active automatic door(s) at each floor. If the system has only one door, then you can not use this section. In order to set the data given in this section, number of automatic doors [A08] in cabin must be 2.

ACS Series

```
 00.FLR   DOOR  A:1  ON
>01.FLR   DOOR  A:0  OFF
 02.FLR   DOOR  A:1  ON
 03.FLR   DOOR  A:1  ON
```

ACH and ACT Series

```
 00.FLR DOOR A :1
>01. FLR DOOR A:0
```

If the system has two doors, then they are named as A and B. If your system has two doors in cabin, you can select freely which doors will open in each floor. When you see '1' as data, then it means that this door will open at this floor. When you see '0' as data then it means that this door will not open at this floor. In order to change the condition of the door for a specific floor, press (ENT) key in the line of this floor. In the following screen you can change the data by using (□) and (□) keys between 0 (NO) and 1 (YES).

ACS Series

```
01.FLOOR DOOR A

?00000 0
NO
```

ACH and ACT Series

```
01.FLOOR KAPI A
      ?00000 0 OFF
```

In this screen, the data for 1st floor is displayed as NO. It means that door A will not open at 1st floor. Here 0 is for OFF and 1 is for ON.

For door B, the same procedure applies for item K3.

2-D-3) K4-CABIN CALLS

You can set cabin calls allowance for any floor by using this section. If you switch off cabin call of any floor then any call coming from car operating panel will be discarded. When you enter this section by pressing (ENT) key in menu M24 then you see the following screen.

ACS Series

```
 00.CABIN   CALL:1   ON
>01.CABIN   CALL:2   PE1
 02.CABIN   CALL:3   PE2
 03.CABIN   CALL:0   OFF
```

ACH and ACT Series

```
 00 .CABIN CALL:1
>01.CABIN CALL:2
```

In order to select a floor to change its data, press (ENT) key in its line. Then you see the following edit screen. You can change the data by using (□) and (□) keys between 0 and 3.

ACS Series

```
03.FLOOR CABIN CALL

?00000 0
OFF
```

ACH and ACT Series

```
03.CABIN CALL
      ?00000 0 OFF
```

The parameters used in this screen are as follows

0	OFF A cabin call for this floor is not allowed
1	ON A cabin call for this floor is always allowed.
2	PE1 If the clock time is within the time interval PERIOD1 which is specified in section K8, then the cabin call is allowed, otherwise not allowed.
3	PE2 If the clock time is within the time interval PERIOD2 which is specified in section K8, then the cabin call is allowed, otherwise not allowed.

2-D-4) K5-HALL CALLS

You can set hall calls allowance for any floor by using this section. If you switch off hall call of any floor, then any call coming from landing operating panel will be discarded. When you enter this section by pressing (ENT) key in menu M24, then you will see the following screen.

ACS Series

```
>00.HALL   CALL:  1 ON
 01.HALL   CALL:  0 OFF
 02.HALL   CALL:  1 ON
 03.HALL   CALL:  3 PE2
```

ACH and ACT Series

```
>00.HALL CALL:1
 01.HALL CALL:0
```

In order to select a floor to change its data, press (ENT) key in its line. Then you see the following editing screen. You can change the data by using (□) and (□) keys between 0 and 3.

ACS Series

```
00.HALL CALL

?00000 1
ON
```

ACH and ACT Series

```
00.HALL CALL:
      ?00000 1 ON
```

The parameters used in this screen are as follows

0	OFF A hall calls for this floor is not allowed
1	ON A hall calls for this floor is always allowed.
2	PE1 If the clock time is within the time interval PERIOD1 that is specified in section K8, then the hall calls are allowed, otherwise not allowed.
3	PE2 If the clock time is within the time interval PERIOD2 that is specified in section K8, then the hall calls are allowed, otherwise not allowed.

2-D-5) K6-ENCODER PULSE OF FLOORS

If you select as floor selector 3 (incremental encoder) or 4 (absolute encoder) in [A05], then you can enter this section and edit pulse data for any floor.

ACS Series

```
>00.FLR   PULSE:100
 01.FLR   PULSE:1200
 02.FLR   PULSE:2350
 03.FLR   PULSE:3510
```

ACH and ACT Series

```
>00.FLR: 100
 01.FLR: 1200
```

In order to select a floor to change its data, press (ENT) key in its line. Then you see the following editing screen.

ACS Series

```
02.FLR PULSE:

?00246 8_
```

ACH and ACT Series

```
02.FLR PULSE:
      ?00246 8_
```

You can change the data by using (□) and (□) keys. In order to go from column to column, use (□) and (□) keys.

2-D-6) K7-GENERAL PULSE

This parameter is used only if [A05] is 3 (incremental encoder) or 4 (absolute encoder). The parameters given in this section correspond to the distances that are used for all floors. When you change any pulse number, then the distance for the related path is changed in all floors. All of the data given in this section are the distances in encoder pulses to the floor level specified in the previous section.

ACS Series

```
  MKD STOPPER
  MKU STOPPER
  SLOW DOWN
>DOOR ZONE
```

ACH and ACT Series

```
  MKD STOP :12
>MKU STOP :12
```

MKD STOPPER: The distance in pulses between the exact floor level and the point of stop command when two stoppers (A10=1) are used while moving downwards.

MKU STOPPER: The distance in pulses between the exact floor level and the point of stop command when two stoppers are used while moving upwards.

SLOW DOWN: The distance in pulses where the controller switches to low speed when it reaches its target floor.

DOOR ZONE: The distance in pulses from the exact floor level to the level in which the automatic door can be opened. The pulse number given in this parameter applies from the floor level up and down.

LEVELING START: The start limit of releveling zone in pulses. The controller activates releveling process when the lift exceeds pulse that specified with this parameter.

LEVELING STOP: The stop limit of releveling zone in pulses. The controller deactivates releveling process when the lift distance from floor level pulse is under than specified with this parameter.

MK LENGTH UP: The distance between car and floor when the MK shalter is active while moving upwards.

MK LENGTH DOWN: The distance between car and floor when the MK shalter is active while moving downwards.

DECELERATION 3th SPEED: The minimum distance in which lift can pass from HIGH speed to SLOW speed.

DECELERATION 4th SPEED: The minimum distance in which lift can pass from ULTRA speed to SLOW speed.

MINIMUM WAY 3th SPEED: The minimum distance in which lift can reach HIGH speed and slow down.

MINIMUM WAY 4th SPEED: The minimum distance in which lift can reach ULTRA speed and slow down.

2-D-7) K8-CALL REGISTER PERIODS

ACS Series

```
>PERIOD1 08:30 -12:30
 PERIOD2 13:30 -18:30
```

ACH and ACT Series

```
 PE1 08:30 -12:30
 PE2 13:30 -18:30
```

You can specify two periods in this section. The first one is used as the period PE1 and the second is PE2 in sections K5 and K6 where call register allowance is specified. Here the data given are 24 hours time system. As an example for the screen shown above any hall or cabin call register can be active between from 8:30am to 12:30pm if it is selected as PE1.

2-E) P5-MAINTENANCE TIME

You can see or set next maintenance date by using P5 in menu M20. In this section, you see current settings of the next maintenance date.

ACS Series

```
NEXT MAINTENANCE
 31/12/2011
```

ACH and ACT Series

```
NEXT MAINTENANCE
 31/12/2011
```

If you press any key in this screen then you will come to the maintenance date editing screen.

ACS Series

```
NEXT MAINTENANCE
DAY..: ?000031
MONTH: ?000012
YEAR.: ?00201 1 _
```

ACH and ACT Series

```
NEXT M AINTENANCE
DAY..: ?00003 1 _
```

You can change maintenance date in this screen. When the real date exceeds maintenance date, then the lift pass to out of service mode. You can also see "MAINT" text in the main screen when maintenance date is exceeded.

2-F) P6-OUTPUT DEFINITIONS

In AC Series, there are up to 33 programmable outputs plus 1 output on additional ERS system. The summary of these outputs are as follows:

NO	CODE	PLACE	CONTACT V/I	CONTACT TYPE	EXPLANATION
1	S1	ACS/ACH/ACT	220V/10A	Normally Open Common	Freely programmable in all lift types.
2	S2	ACS/ACH ACT	220V/10A Transistor	Normally Open Common	Freely programmable in all lift types.
3	S3	ACS	220V/10A	Normally Open Common	Freely programmable.
4	S4	ACS/ACH/ACT	220V/10A	Normally Open Common	Freely programmable in all lift types.
5	O1	OUT	220V/5A	Normally Open	O1, O2, O3 relays have same common COM and O4 has common C4 on OUT board.
6	O2	OUT	220V/5A	Normally Open	
7	O3	OUT	220V/5A	Normally Open	
8	O4	OUT	220V/5A	Normally Open	
9	O5	EOR	220V/5A	Normally Open	O1, O2, O3 and O4 relays are all have the same common (C1) on EOR board.
10	O6	EOR	220V/5A	Normally Open	
11	O7	EOR	220V/5A	Normally Open	
12	O8	EOR	220V/5A	Normally Open	
13	O9	EOR	220V/5A	Normally Open	O5, O6, O7 and O8 relays are all have the same common (C2) on EOR board.
14	OA	EOR	220V/5A	Normally Open	
15	OB	EOR	220V/5A	Normally Open	
16	OC	EOR	220V/5A	Normally Open	
17	R1	SCC/ACC	220V/5A	Normally Open	Freely programmable in all lift types.
18	R2	ACC	220V/5A	Normally Open	Freely programmable in all lift types.
19	R3	ACC	220V/5A	Normally Open	Freely programmable in all lift types.
20	R4	ACC (OUT)	220V/5A	Normally Open	O1, O2, O3 relays have same common COM and O4 has common C4 on OUT board.
21	R5	ACC (OUT)	220V/5A	Normally Open	
22	R6	ACC (OUT)	220V/5A	Normally Open	
23	R7	ACC (OUT)	220V/5A	Normally Open	
24	E1	SCC/ACC (EOR)	220V/5A	Normally Open	O1, O2, O3 and O4 relays are all have the same common (C1) on EOR board.
25	E2	SCC/ACC (EOR)	220V/5A	Normally Open	
26	E3	SCC/ACC (EOR)	220V/5A	Normally Open	
27	E4	SCC/ACC (EOR)	220V/5A	Normally Open	
28	E5	SCC/ACC (EOR)	220V/5A	Normally Open	O5, O6, O7 and O8 relays are all have the same common (C2) on EOR board.
29	E6	SCC/ACC (EOR)	220V/5A	Normally Open	
30	E7	SCC/ACC (EOR)	220V/5A	Normally Open	
31	E8	SCC/ACC (EOR)	220V/5A	Normally Open	
32	EKS S1	ERS(EKS)	220V/5A	Normally Open	Freely programmable in all lift types.
				Normally Open Freerlyeprogronmmaaiblbeoianrd	
33	KK	ACS/ACH/ACT	220V/10A	lilslinottypengwhen Common	doo r lays am n a ft s usi . Common terminal is KO.

Select the output number from output screen menu and press (ENT) button to change. Then choose which function is linked to this output from the second screen and complete the output definition with (ENT).

CODE	SELECTED CASE	EXPLANATION
1	STOP CLOSED	Stop circuit is closed (Terminal 120 is on)
2	STOP OPEN	Stop circuit is open (Terminal 120 is off)
3	INSPECTION	System is in Inspection mode (Terminal 869 is on)
4	NORMAL OPERATION	System is in normal mode (Terminal 869 is off)
5	FAULT OCCURANCE	There is an error
6	NO FAULT	There is no error, system works normal
7	SLOW MOTION	The car is moving at slow speed
8	NO SLOW MOTION	The car is not moving at slow speed
9	NO MOTION	The car is not moving
10	MOTION	The car is moving at any speed
11	FAST MOTION	The car is moving at fast speed
12	FAST / HIGH MOTION	The car is moving at fast or high speed
13	DOOR LOCK CLOSED	Door lock circuit is closed. (Terminal 140 is on)
14	DOOR LOCK OPEN	Door lock circuit is open. (Terminal 140 is off)
15	AT FLOOR LEVEL	The cabin is at floor level
16	AT FLOOR LEVEL NO MOTION	The car is staying in rest and the cabin is at floor level
17	DIRECTION UP	Direction is up
18	DIRECTION DOWN	Direction is down
19	BUSY ON	Busy
20	START OR MOTION	The system is moving or in START state
21	VVVF BRAKE	Brake output for variable speed lifts
22	LEVELING UP	Upwards releveling
23	LEVELING MOTION	The system is in releveling motion
24	PARK TIME	Waiting for park period
25	MOTION+BRAKE	The system is in motion or in braking
26	RETIRING CAM	Retiring cam. Door contacts are closed and there is motion
27	MOTION+BRAKE(INS)	The system is in motion or in braking
28	HIGH SPEED	The car is moving at 3rd Speed (High)
29	PAWL DEVICE	Pawl device output
30	START AND LOCK	The system is in motion or door lock is on
31	NO CALLS	There is no call registered
32	ZERO SPEED	Zero speed output for VVVF drives. (Jog)
33	JOG SPEED	The system is in inspection mode and in motion
34	M0 SIMULATOR	Simulator outputs
35	MK SIMULATOR	
36	817 SIMULATOR	
37	HYDRAULIC UP	Up motion in hydraulic lift
38	HYDRAULIC DOWN	Down motion in hydraulic lift
39	DEVICE RESET	Device reset signal on device error
40…44	M0…M4	Gray code outputs
45	CLOSE 2nd DOOR	Close door signal for door 2
46	OPEN 2nd DOOR	Open door signal for door 2
47	GONG	Gong
48	LEVELING	Leveling
49	PREOPEN+LEVELING	Door pre-opening and leveling
50	DOOR BRIDGING	Door pre-opening Door
51	DOOR LOCK+BRAKE	lock + brake
52	FAST DELAY	Fast Delay
53	DOWN SERVICE ARROW	Down service arrow
54	UP SERVICE ARROW	Up service arrow

55	MAX. START COUNTER	Maximum number of start exceeded
56	ML OUTPUT	ML output (Lift is in slow speed and ML input is active)
57	HYDRAULIC MOTION	Hydraulic motion (37+38)
58	ALARM FILTER	Emergency phone alarm filter
59	PREOPEN+LEV. 2 DOOR	Pre-opening and Door Bridging-2
60	FIRE DOOR ALARM	Door close command output in fire
61	NO FLOOR LEVEL 140-	Door lock failure out of floor level
62	PRIORITY CALL	Priority call
63	OUT OF SERVICE	Out of service signal
64	OVERLOAD	Overload (804 input is active)
65	OVERLOAD SIGNAL	Overload signal (Output Signal 35 is active)
66	SLOW OR STOP	Slow speed or stop
67	POWER LINE OK	Power line is OK
68	POWER LINE FAILURE	Failure on power line
69	ERS is PASSIVE	ERS is not active
70	ERS is WORKING	ERS is active
71	UPS ERS	UPS ERS is active FKK
72	ERS FKK	in ERS mode
73	FIRE	Fire signal
74	DOOR SIDE A	Door A is active Door
75	DOOR SIDE B	B is active
76	COUNTER M0	Counter M0 signal
77	NEXT DIRECTION DOWN	Next direction is down
78	NEXT DIRECTION UP	Next direction is up
79	NOT BUSY	System is not busy
80	FAN	Fan is active
81	SHORT FLOOR BOTTOM	If bottom floor is shorter than the other floors and when the target is bottom floor, this output activated (1 sec) one floor before reaching bottom floor. (Set 81 to [B07])
82	SHORT FLOOR TOP	If top floor is shorter than the other floors and when the target is top floor, this output activated (1 sec) one floor before reaching top floor. (Set 82 to [B07])
83	SPEED GOVERNOR COIL	Speed governor coil is activated
84	HALL CALL SIGNAL	There is a call in system. (Only when WM2 is active in parallel system)
85	DOWN IN FIRE	Lift is moving downwards direction in fire
86	UP IN FIRE	Lift is moving upwards direction in fire
87	HIGH TEMPERATURE	This output activated if temperature is more than [B46]
88	DOOR INHIBITED	This output activated if the door is not close among [C40]
89	BLOCKED	System is blocked as a result of an error.
90	ULTRA SPEED	Ultra speed is active
91…95	B0…B4 BINARY CODES	Binary code outputs
96	LOADING	Loading period (C32) is activated by LDB input . 97
	SWITCH OFF UPS	Switch UPS off after completing rescue operation.
100+i	CAR STAYING AT FLOOR	The car is staying in rest at 'i' th floor
200+i	CAR IS AT FLOOR	The car is in 'i' th floor

After the procedure described above, the defined output relay will be activated according the event you selected. If the state of lift matches the one you selected than the output relay is ON otherwise it is OFF.

To program these outputs, first select P6 in menu M20 and see the following screen:

ACS Series

```
S1:026   LIRPOMP
S2:000   FREE
S3:000   FREE
S4:000   FREE
```

ACH and ACT Series

```
S1:26 LIRPOMP
S2:0 FREE
```

Set Output No at row 2 and see the related output at bottom row. As an example, let us set S1 output as error indicator. Choose Output No =1.

ACS Series

```
TERMINAL: S1
BOARD     : (ACS)
?00002 6_
CAM
```

ACH and ACT Series

```
CAM
S1: ?00002 6_
```

Then set output code as 5 and push ENT to save the changes. From now on, S1 relay will be activated in case of an error.

ACS Series

```
TERMINAL: S1
BOARD     : (ACS)
?00000 5_
FAULT OCCURANCE
```

ACH and ACT Series

```
FAULT OCCURANCE
S1: ?00000 5_
```

2-G) P7-INPUT DEFINITIONS

The details of this section are explained in 1-C and 1-D sections.

2-H) P8-DATE & TIME

The time and date of the system can be set in this section.

ACS Series

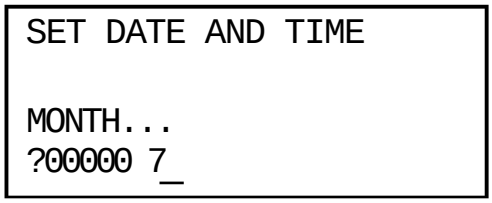
```
YEAR... .:201 2      M26
MONTH. ..:07
DAY .... .:11
HOUR.... :17
```

ACH and ACT Series

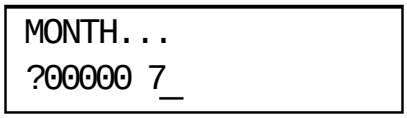
```
 YEAR....:2012
>MONTH...:07
```

You can edit any item in this screen after selecting line by using (□) and (□) keys and then pressing (ENT) key.

ACS Series



ACH and ACT Series

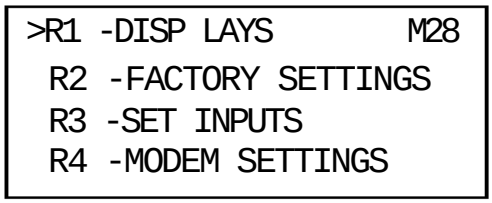


You can change the data by using (□) and (□) keys. In order to pass from column to column, use (□) and (□) keys. After complete editing, press (ENT) key to save the new data. In the same manner, you can edit year, month, day, hour and minute.

2-I) P9-UTILITIES

This section contains some non-standard procedures utilities which may help you to configure your system.

ACS Series

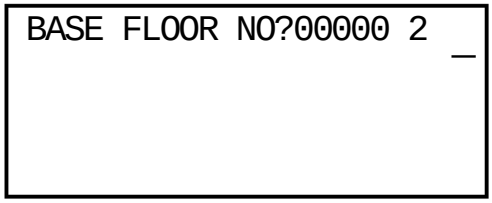


ACH and ACT Series

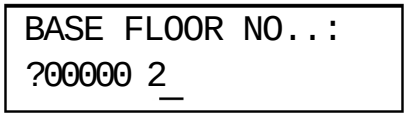
2-I-1) R1-DISPLAY UTILITIES

In this utilities section the following screen is waiting for an input:

ACS Series



ACH and ACT Series



You can change the data by using (□) and (□) keys between 0 and maximum floor number. If you specify which floor is the entrance floor of the building then this utility sets the digital display of the entrance floor (base floor) as 0. All floors above this floor are numbered starting from 1 and incremented by 1 at every floor. All floors below 0 (base floor) are numbered starting from -1 and decremented by 1 at every floor. If you have a regular display order in your system but few exceptions, first use the utility explained above and change the data for exceptional floors one by one.

2-I-2) R2-FACTORY SETTINGS

If you want to set all parameters to factory settings values then you can use this section. It clears all the parameters entered by the user and set them to factory defaults.

2-I-3) R3-SET ALL INPUTS

Setting all of the inputs according to the system (parallel or serial) used is explained in section 1-D.

2-I-4) R4-MODEM SETTINGS

ACS Series

```
>X1 -TEL #1 -ERROR
 X2 -TEL #2 -ALARM
 X3 -SETTING 1
 X4 -SETTING 2
```

ACH and ACT Series

```
>X1 -TEL #1 -ERRO R
 X2 -TEL #2 -ALARM
```

X1) Phone number will be used by the GSM modem in case of an error X2)
Phone number will be used by the GSM modem in case of an alarm
X3) Modem initialization string 1
X4) Modem initialization string 2

2-I-5) R5-RESET PULSES

ACS Series

```
ALL ENCODER
PULSE WILL CLEAR

ENT -OK
```

ACH and ACT Series

```
ALL ENCODER
PULSE WILL CLEAR
```

You can enter this section if you are using incremental or absolute encoders as floor detector. When you see the screen as above then pressing (ENT) will make all encoder pulse records as 0.

2-I-6) R6-OTHER UTILITIES (Do NOT Use)

This menu is designed for authorized technical persons. There is no function for user. It may cause undesired results to enter anything to this menu. If you enter this menu by mistake, exit by ESC key.

2-I-7) R7-SET PASSWORD

You can change your password from this utility. When enter this menu, system asks current password.

ACS Series

```
CURRENT PASS ?00000 0
                     _
```

(ENT)

```
CURRENT PASS ?002345
NEW PASSWORD ?003200
Confirm New Password
ENT -SAVE
```

ACH and ACT Series

```
PASSWORD ?00000 0
                 _
```

(ENT)

```
PASSWORD ?002345
NEW PASS.?003200
```

(ENT)

```
Confirm New Pass
ENT -SAVE
```

If you enter password correctly then system permits you to change system password between 0 and 32000. Here if you again push ENT new password will be saved. However, you can cancel changes by pushing ESC button.

2-I-8) R8-COUNTER

Counter value that lift able to make until next maintenance. You can see current counter value in state screen (if you hold ESC button pressed on main screen). Counter can be set between 1 and 99999. It will be passive when you set this parameter as 0. When lift counter exceed this parameter value, system will BLOCKED. To activate system again, increase this parameter value or set it passive by 0.

ACS Series

```
CLEAR START C OUNTER
(↑ )-CONTINUE
```

ACH and ACT Series

```
CLEAR START COUN
(↑ )-CONTINUE
```

2-I-9) R9-SECURITY ID

Firstly, you must set [B31] parameter for proper access operation!

You can edit ID security settings from this menu. When you enter R9-SECURITY ID menu, below screen appears.

ACS Series

```
>Y1 -ID LIST
 Y2 -ADD NEW ID
 Y3 -CLEAR ID
 Y4 -CLEAR ALL IDS
```

ACH and ACT Series

```
>Y1 -ID LIST
 Y2 -ADD NEW ID
```

i) ID LIST

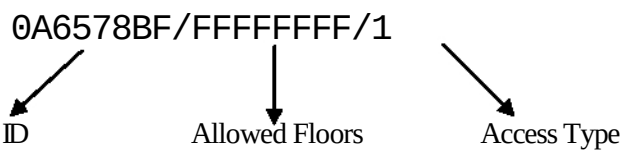
Use this menu to edit registered ID settings. When arrow is at ID LIST line, press ENT and registered ID list will show on the screen.

ACS Series

```
>0A6578BF/FFFFFFFF/1
 0A632B16/00000008/2
 0A65678C/00000024/1
```

ACH and ACT Series

```
>0A6578BF/FFFF/1
 0A632B16/0008/2
```



Choose the ID which you want to edit and press ENT

ACS Series

```
ID NO : 0A657 8BF
SELECT OPERATION
?00000 1
ALL FLOORS ALLOWED
```

ACH and ACT Series

```
>0A6578BF/FFFF/1
 0A632B16/0008/2
```

In this menu you can choose operation with (□) and (□) keys and press ENT.

1	**All Floors Allowed**	For allowing all floors, choose 1 with (□) and (□) keys and press ENT. (Floors = FFFFFFFF)	
2	**No Floors Allowed**	For allowing no floor, choose 2 with (□) and (□) keys and press ENT. (Floors = 00000000)	
3	**Edit Allowance**	**0 - No Access**	No access to call register
		1 - Full Access	Full access to permitted floors call registers
		2 - Accessible in PE1	Access to permitted floors call register only in PE1 period (K8-Call Register Periods)
		3 - Accessible in PE2	Access to permitted floors call register only in PE2 period (K8-Call Register Periods)
		4 - Priority Key	Key is a priority key.
4	**Allow One Floor**	Choose floor number with (□) and (□) keys and press ENT (It is 32-bit binary number shown in hexadecimal format. Each bit represents one floor) For stops 3, 5, 10, 16, 23, 30: Floors : 40810428 (01000000100000010000010000101000b)	
5	**Restrict One Floor**	Choose floor number with (□) and (□) keys and press ENT (It is 32-bit binary number shown in hexadecimal format. Each bit represents one floor) For stops 0, 7, 12, 19, 25, 29: Floors : 22081081 (00100010000010000001000010000001b)	

ii) ADD NEW ID

To add a new ID, choose Y1-Add New ID line with (□) and (□) keys and press (ENT) button. New screen displays and system waits until you put any station to the ID device. When system communicates with your ID device, device ID number will shown on the screen and ENT key will register it to the system.

iii) CLEAR ID

Locate '>' character to Y3-Clear ID line and when press (ENT), registered IDs lists will shown. Choose which one you want to clear and press (ENT). After pass to new screen, you can complete clear operation with (□) key.

iv) CLEAR ALL IDs

To clear all registered IDs, choose Y4-Clear All IDs and press (ENT).

2-I-10) RA-ENCODER SETUP

After completing all installation (817, 818, encoder, encoder rope, MK switch, magnets), connection and parameters settings, start auto-learning process. In normal mode enter M2-PARAMETERS>P9-UTILITIES>RA>ENCODER SETUP menu. Press (□) button to start auto-learning.

ACS Series

```
 ENC SHAFT LEARNING

(↑) -START
```

(□)

```
 EN C SHAFT LEARNING
       1030
F:01 FLR:00     100
0
```

```
 ENC SHAFT LEARNING
OK
ENT -SAVE
```

ACH and ACT Series

```
 ENC SHAFT LEARN
(↑) -START
```

(□)

```
F:01 FLR:00 100 0
0       1030
```

```
OK
ENT -SAVE
```

Firstly, car comes to bottom floor then it goes up in high speed to top floor to read all floor MK magnets and calculating floor distances. Then it goes to bottom and moves up again. During this up travel, it moves slowly at floor levels and measures length of strip magnets on MK line.

To take average of magnet lengths, system calculates exact floor levels. So when car reaches to top floor, process finishes. An approval message is shown on LCD screen.

By pushing (ENT) button all pulse values are stored in permanent memory. By pushing (ENT) button again, lift gets a call for bottom floor and moves.

During auto-learning process, system assigns K6-FLOOR PULSES and K7-GENERAL PULSE>MK LENGTH UP and DOWN parameters automatically. Bottom floor pulse value is assigned as 1000. All pulse values can be changed manually for fine-tuning. MK LENGTH values will be higher than actual length. This is because magnetic field of magnet is larger than its actual size. For detailed information, please look at "*SHAFT POSITIONING SYSTEM WITH INCREMENTAL ENCODER INSTALLATION MANUAL".*

2-J) P0-MAX START

This menu limits max travel count for maintenance purposes.

CHAPTER 3:
ERROR LOG AND ERROR CODES

In AC Series Control Systems, all determined errors are reported at runtime on main screen and stored in permanent memory. Error storing capacity of system is limited to 250. If an error occurs when there are 250 errors stored in memory, then oldest error is cleared and the new one is stored. You can see last 250 stored errors anytime by using LCD screen or from computer connection. Here we will see how to see error list reports by using keypad and LCD.

On main menu, enter M3-ERROR LOG sub-menu.

ACS Series

```
 M1 -VARIABLES        M00
 M2 -PAREMETERS
>M3 -ERROR LOG
 M4 -LANGUAGE/DiL
```

ACH and ACT Series

```
>M3 -ERROR LO G
 M4 -LANGUAGE/DiL
```

And then you see the list of stored error logs.

ACS Series

```
 013)18 -F11   22.12.10
 014)03 -F08   12.11.10
 015)06 -F07   08.10.10
>016)02 -F03   13.09.10
```

ACH and ACT Series

```
 015)06 -FLR:7
>016)02 -FLR:3
```

Error logs are sorted by date&time property. In this screen, you can only see floor, error date, time and error code. If you want to see more detailed report, select an error by using arrow keys and push (ENT) button.

ACS Series

```
/OLD ERROR REP ./#2
13.09.2010 - 17:53
FLR:3 FAST □
DOOR CONT.ARE OPEN
```

ACH and ACT Series

```
DOOR CONT OPEN
02 -FLR:3 FAST □
```

```
DOOR CONT OPEN
13.09.2010 -17:53
```

In this screen, you see error date&time, floor, speed and direction of car (when error occurred) and explanation of error. Enter Code:399 (M5-SERVICES) to clear all error list.

AC SERIES ERROR CODES		
CODE	**ERROR**	**EXPLANATION**
1	**Stop Circuit Is Open**	Stop circuit-120 (Speed regulator, parachute contact, stop buttons…) is cut during motion.
2	**Door Cont. Are Open**	Door Contact circuit-130 is cut during motion.
3	**Door Locks Are Open**	Door Lock circuit-140 is cut during motion.
4	**Bottom Limit Is Open**	Down limit signal (817) is cut during down motion. (Except bottom floor)
5	**Top Limit Is Open**	Up limit signal (818) is cut during up motion. (Except top floor)
6	**Pass Time Overflow**	At fast speed, system could not get new floor data during the period defined at [C08]. At slow speed, system could not get Stopper (MK) signal during the period defined at [C09].
7	**Door Cannot Open**	After transmitting door open command, Door Lock (130) or Door Contact signals have not cut during the period defined at [C04].
8	**Lock Wait Overflow**	After transmitting door close command, Door Lock (130) or Door Contact signals could not read during the period defined at [C05].
9	**High Limits Are Open**	Both up and down high speed limits (817 and 818) are open.
10	**Floor Info Error**	Error in floor information.
11	**Counter Error**	Inconsequence in displays and limit signals at top/bottom floor.
12	**Encoder Direction Error**	Replace ENA and ENB connection to each other.
13	**No Encoder Signal**	Check electrical connections and rope contact of encoder.
15	**Park Floor Definition Is Wrong**	Defined park floor [B04] is more than maximum number of stops [A01].
16	**Fire Floor Definition Is Wrong**	Defined fire floor [B05] is more than maximum number of stops [A01].
18	**No Car Communication**	System cannot communicate with car unit in serial communication mode.
19	**No Landing Communication**	System cannot communicate with floor unit(s) in serial communication mode.
20	**PTC/Thermistor Failure**	System cannot get signal from thermistor.
21	**Fast Limits Are Open**	System uses 3rd speed. But there is no signal at mid-speed limit inputs (HU, HD).
26	**Machine Room Temperature**	THR input is open circuit. Check thermostat connections and settings.
27	**Driver Error**	System gets error signal from hydraulic or speed control (inverter) unit.
28	**Releveling Error**	Although car is out of safety zone (MK1, MK2 closed), releveling command is received from shaft.
29	**Contactor Failure**	Although there are no contactors activated and the door is open, there is no signal in CNT terminal.
30	**Phase Failure**	Failure in phases.
31	**Phase Sequence Error**	Error in phase sequence.
32	**External FKK Error**	Signal received from external FKK input.
33	**ML2 Open At Floor**	Check the magnet locations and ML2 shalter in releveling zone.
34	**ML2 Short Circuit**	Check the MK, MKD, MKU shalters and magnet locations in releveling zone during door bridging is active.
35	**L1/R Phase Failure**	L1/R phase is cut.
36	**L2/S Phase Failure**	L2/S phase is cut. L3/T
37	**L3/T Phase Failure**	phase is cut.
38	**No Motion In System**	No motion detected in defined time [C21]. If RUN input is not used, set [C21] parameter as 0.
39	**Group No Failure**	There are more than one member in the group with the same group number specified [A13].
41	**Leveling Period Exceeds**	Leveling process tooks longer time than the period specified in parameter [C23].

42	**CAN-0 Line Error**	Serial communication line of car and landing units reported LINE ERROR.
43	**CAN-0 Bus Error**	Serial communication line of car and landing units reported BUS ERROR.
44	**Maximum Motor Time**	Maximum motor movement time [C28] is exceeded.
45	**Bridging Error**	SLB (or ACH) board cannot bridge safety line.
46	**ERS TI Error**	In emergency rescue operation, transformer inverter is not running. In
47	**ERS MI Error**	emergency rescue operation, motor inverter is not running.
48	**Low Battery**	In emergency rescue operation, the battery voltage is too low for proper operation.
49	**ERS Door Not Open**	In emergency rescue operation the door cannot be opened in time period stored in timer parameter [C29].
50	**ERS Door Not Closed**	In emergency rescue operation the door cannot be closed.
51	**ERS Maximum Current**	In emergency rescue operation the motor current in emergency rescue operation is higher than the current value stored in parameter [B30].
52	**ERS Period Exceeds**	Emergency rescue operation period exceeded the period stored in timer parameter [C25].
53	**ML1 Open At Floor**	Check the magnet locations and ML1 shalter in releveling zone.
54	**ML1 Short Circuit**	Check the MK, MKD, MKU shalters and magnet locations in releveling zone during door bridging is active.
55	**Hydraulic Upper Stop**	Hydraulic lift top stop limit point is passed and stop line is opened.
56	**24V Not Present**	Signal circuit supply is cut. (Check 100/1000)
57	**Call Button Error**	Hall/Cabin call button is not released.
58	**Earthquake**	Earthquake signal received from input.
59	**Start Prohibited**	RDY and RUN inputs are both ON. RDY
60	**Start Prohibited**	and RUN inputs are both OFF.
61	**NGV Signal Error**	RDY,RUN inputs states are not change on START. (RDY=0,RUN=1)
62	**NGV Signal Error**	RDY,RUN inputs states are not change on STOP. (RDY=1,RUN=0)
63	**External UCM Error**	External UCM error signal received from input.
64	**Brake Not Closed**	Although brake coil is not energized, no signal received from brake feedback contact. Check BR1,BR2 terminals.
65	**Brake Not Opened**	Although brake coil is energized, signal received from brake feedback contact. Check BR1,BR2 terminals.
66	**KSG Contact Failure**	Although KSG contactor is not energized, SGC input signal is active.
67	**KSG Contact Failure**	Although KSG contactor is energized, SGC input signal is not active.
68	**Security Valve Fault**	Error in security valve.
69	**Down Valve Fault**	Error in down valve.
70	**Overspeed Governor Contact Failure**	While lift is moving, although overspeed governor coil is energized, SGO,SGC input signals are wrong. (They must be SGO=0,SGC=1).
71	**Undefined Region**	In encoder application, high speed limit inputs are inconsistent
72	**UCM Fault**	Unintended Car Movement UCM detected.
73	**SGO Contact Failure**	Although OSG A3 coil is not energized, SGO input signal is not active.
74	**SGO Contact Failure**	Although OSG A3 coil is energized, SGO input signal is active.
75	**iValve Failure**	An error signal is received on RDY input from iValve unit +SMA output.
76	**End Shalters Failed**	Top and bottom end shalters (917,918) are both open-circuit simultaneously. (B61=1)

CHAPTER 4:
VARIABLES AND LANGUAGE

On main menu you see M1-VARIABLES at first line.

ACS Series

```
>M1 -VARIABLES        M00
 M2 -PARAMETERS
 M3 -ERROR LOG
 M4 -LANGUAGE/DiL
```

ACH and ACT Series

```
>M1 -VARIABLES
 M2 -PARAMETERS
```

This menu is designed to observe all system variables, timers and inputs. This is an observation tool for technical persons to investigate system with details. There is no danger for users to enter this menu and observe variables. However, details of this menu will not be explained in this manual.

Another item in main menu is M4-LANGUAGE/DiL.

ACS Series

```
 M1 -VARIABLES        M00
 M2 -PARAMETERS
 M3 -ERROR LOG
>M4 -LANGUAGE/DiL
```

ACH and ACT Series

```
 M3 -ERROR LOG
>M4 -LANGUAGE/DiL
```

This is shortcut to menu [B11] that is explained above. You can change menu language from this menu. When this manual is prepared, supported languages are Turkish, English, German and Greek. New languages will be supported near future.

The last item in main menu is M5-SERVICES.

ACS Series

```
 M2 -PAREMETERS       M00
 M3 -ERROR LOG
 M4 -LANGUAGE/DiL
>M5 -SERVICES
```

ACH and ACT Series

```
 M4 -LANGUAGE/DiL
>M5 -SERVICES
```

This is also a shortcut to R6-OTHER UTILITIES menu. As explained above, this menu is only for authorized technical persons. There is no function for user. It may cause undesired results to enter anything to this menu. If you enter this menu by mistake, push ESC to exit.

CHAPTER 5:
UCM SERVICE

M6-UCM SERVICE menu is used for EN 81-1/2+ A3 norm related functions.

5-A) U1-CLEAR ERROR

This menu is used to clear UCM Errors (Error 64 and Error 72) that caused the system to be blocked. Before clearing the error and removing the blockage, the reason of error must be detected and removed. Error clearing must be performed by only competent person.

5-B) U2-UCM TEST *(SLB4 board is required for ACT/ACS Series)*

This utility starts Manual UCM Test procedure for Gearless systems and Valve Test procedure for Hydraulic systems.

5-C) U3-TEST TIME

This parameter defines the start date and time for periodic Automatic Test Procedure according to EN 81-1/2+A3 norm. It is active only when parameter B59=2 (Daily Check) and RTC is installed. After completing autotest, the test date is automatically assigned to the next day.

5-D) U4-TEST START

This parameter defines the number of start period of Automatic Test Procedure according to EN81-1/2+A3 norm. When the number of start value reaches the multiples of this period, Automatic test is started. It is active only when parameter B59=1 (Start Count) and can be set between 2 and 1500.

5-E) U5 -TEST COUNTER

Actual number of starts passing after the last Autotest is counted in this parameter for monitoring purposes.